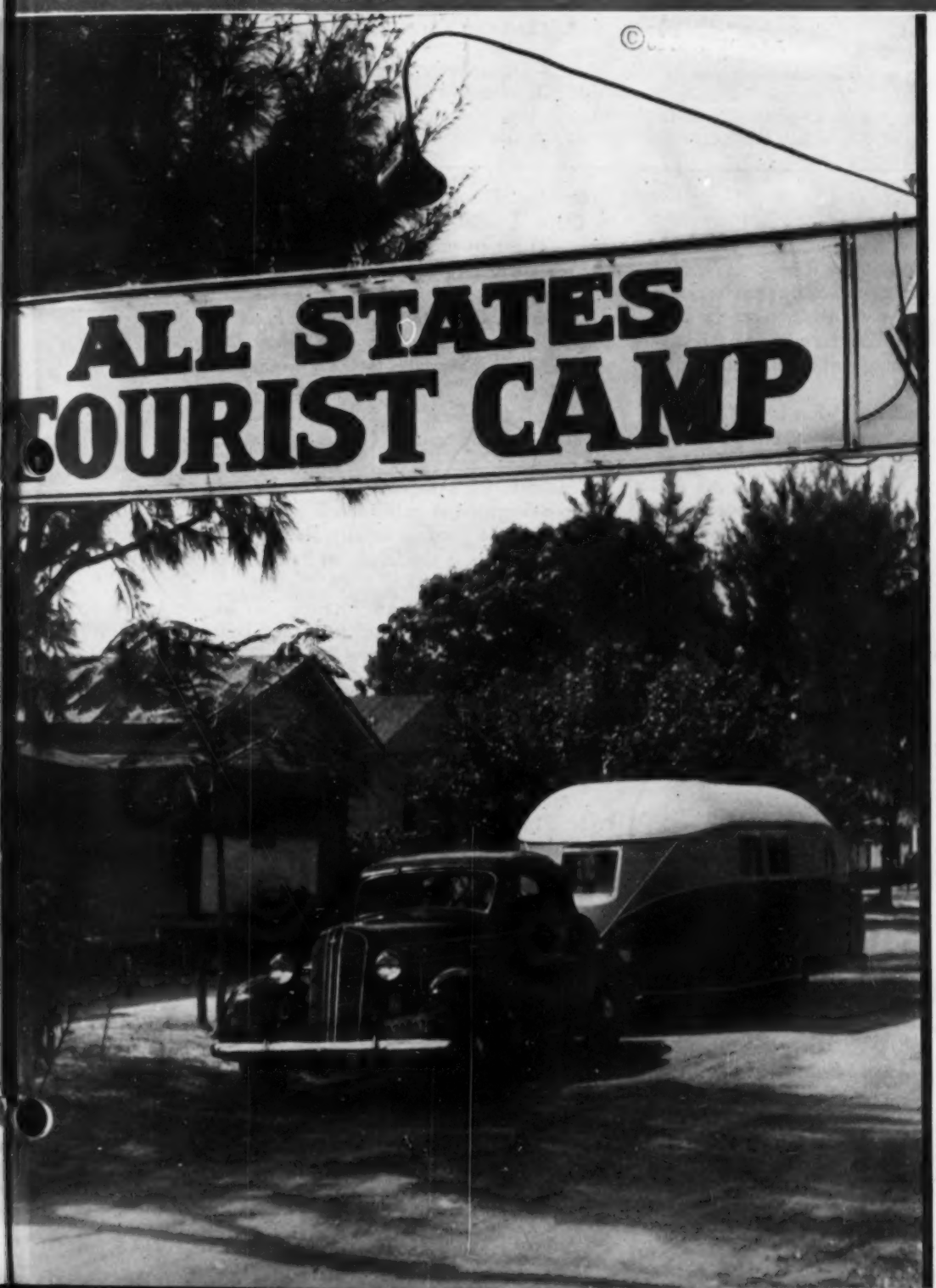
CONSUMERS UNION reports-



MAY 1937

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AUTO TRAILERS
Their Features and Faults—With Ratings of 33 Models

CONSTIPATION
First of a Series of Articles Analyzing Causes and Cures

MOTH PREPARATIONS
What Will Work and What Won't—With Ratings

WASHING MACHINES
Test Results on 10 Brands from $39.95 to $159.50

FRESH FRUITS and VEGETABLES
Some Pointers on How to Buy and Use Them

NOSE DROPS
CU's Campaign Brings Results

GARDEN PESTS
With Ratings of Various Materials for Their Control

News Notes, CU's 1st Year, Letters and Other Features

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CONSUMERS UNION OF UNITED STATES
55 Vandam St. New York

PHOTO BY ODIE MONAHAN

CONSUMERS UNION reports

Vol. 2, No. 4 May, 1937

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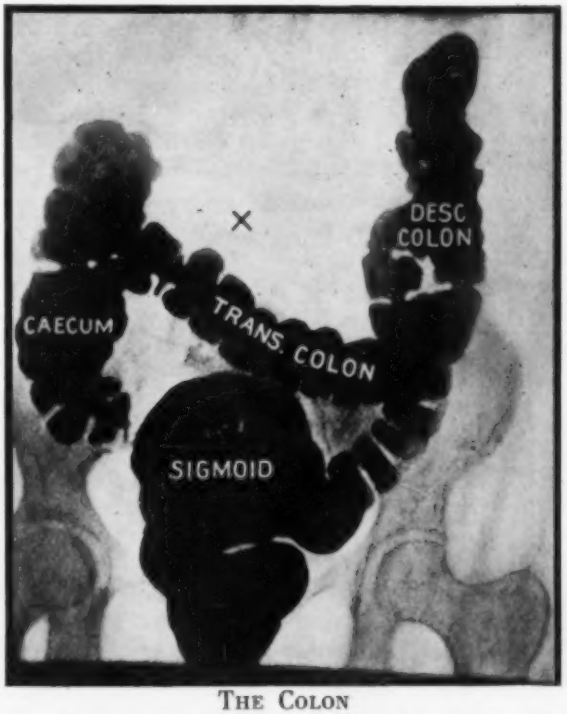

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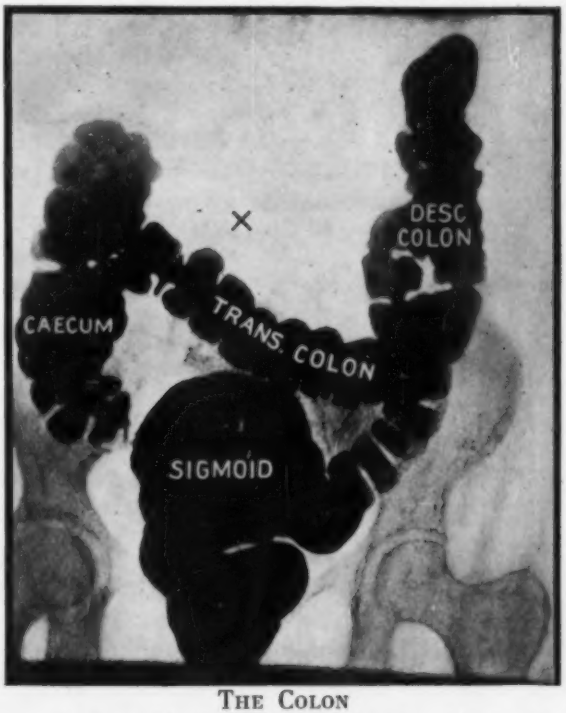

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DR. CANNON DR. HURST DR. ALVAREZ

From these three have come many of the basic observations on the digestive tract.

moval, the practice has been dropped.

Emancipated from the tyranny of the knife, however, the colon soon fell prey to another attack. It was denounced as a repository for malevolent germs—germs that fermented and putrified, germs that devoured the yielding mucous membrane and set up colitis and auto-intoxication. The effects of germs in the colon will be considered in a subsequent article. It may be noted now that most popular notions about them will meet the same fate as Dr. Lane's delusions.

Now a true understanding of constipation and a rational method of treatment can be achieved only in the light of what we know about the anatomy and physiology of the digestive tract. Let us examine it.

THE digestive tract begins in the mouth and ends in the colon. It may be conceived of as a long canal having two reservoirs connected to each other by a long tube, the small intestines. The first reservoir, the stomach, receives a large amount of food at one time and discharges it gradually into the small intestines where the final stages of digestion take place. The second reservoir, the large intestine or colon, receives gradually the waste material left from the digested food. At the junction of the small intestine and the second reservoir is a thick ring of muscle called the *ileo-cecal sphincter*, the function of which is to prevent a too rapid inflow of contents from small intestine to colon.

As the most misunderstood part of the intestinal tract, the colon must be considered in detail. The x-ray picture on page 3 can serve as our guide. You will note that the colon begins as a baggy tube, the *caecum* (generally in the lower right hand side of the abdominal cavity), stretches upwards as the *ascending colon*, turns across the abdominal cavity as the *transverse colon* and then passes downwards with many curves and angles as the *descending colon* and *sigmoid colon*, finally ending at the *rectum*.

The length of an adult's colon varies from 5 to 7 feet and its capacity from 1½ to 3 quarts. Its position should not be considered fixed like that of the liver or spleen. Great differences exist among different people and, even in the same person, change of posture or movements of the abdominal muscles will produce the most bizarre shiftings in the position of the colon.

Years ago, a low position of the colon was considered abnormal and ominously labeled "enteroptosis." Doctors believed that digestive disturbances and constipation were caused by this "ptosis," and lifting operations were performed to correct it. Such operations are performed no longer, for it was soon discovered that the operation did not cure, and that the stomach and colon are able to function perfectly normally irrespective of their positions.

Abdominal belts, also designed to lift a drooping colon, were popular for a time, but are not worn so commonly today. Their place in the treatment of constipation will be taken up in a later article.

If we compare the digestive tract of man with that of other animals we learn many illuminating things. Herbivorous animals live on grasses and grains and possess large reservoirs in which their food can ferment for days. In these reservoirs cellulose, or the roughage which remains after the process of digestion is completed, is attacked by fermenting germs and split into products which are absorbed into the blood from the walls of the large intestine. Herbivorous animals are supplied with either a large, many-chambered stomach or a big caecum, in which this process of fermentation can go on. The colon is also large and has many pouchings; in some birds it is twice as long as the small intestine.

The colon of a meat-eater (carnivore), on the other hand, is generally short as compared with the small intestine and its walls are simply built. Man is an omnivorous animal living on grains, legumes and meat. His colon resembles the colon of a carnivorous animal. It is short compared with the rest of the bowel and the smallness of

the caecum shows that it was designed for the handling of only a small amount of cellulose or roughage. We shall return to these significant facts when we take up the place of diet in the treatment of constipation.

DR. WALTER CANNON, professor of physiology at Harvard University Medical School, and one of the most distinguished of physiologists, made the fundamental observations on the digestive tract which furnish the basis for much of our treatment of intestinal disorders. In the late nineties, while still a medical student, he conceived the idea of feeding cats a mixture of food and bismuth salts and observing the movements of the digestive tract with the x-rays that had recently been discovered. The bismuth outlines the intestinal canal, permitting easy study under the screen of a fluoroscope.

Dr. Cannon found that when the small intestine was studied in this way, two types of activity could be seen. The first was *peristalsis*, by which the contents of the intestinal canal are propelled downwards; large waves arise in the upper part of the small intestine and rush down the bowel to the colon pushing the material before it. We are not conscious of these peristaltic rushes in health. Sometimes, however, they may be recognized by the gurgling sounds they make as they traverse the gut.

The second type of activity that Dr. Cannon observed was *segmentation*, in which the small intestine suddenly divides into short segments as a result of sharp, localized contractions of the circular muscle fibers. This activity causes a thorough mixing of food and digestive juices. The mixture, known as *chyme*, is brought into intimate contact with the mucous membrane and thus the products of digestion can be absorbed.

The chyme passes rather rapidly down the many loops of the small intestine and reaches the end about 3½ hours after a meal. In the terminal part of the small intestine, called *ileum*, the material remains for a considerable period, apparently prevented from entering the colon by the ileo-caecal sphincter.

Dr. Arthur Hurst, an English physician responsible for many significant contributions to our understanding of the digestive tract, made a very important observation in this connection. He found that the chyme remained in the ileum until the next meal, emptying into the colon after that. The entrance of food into the stomach starts a rush of waves down the intestines, the ileo-caecal sphincter relaxes and opens and the chyme is poured into the colon. At this stage almost all the nutritious elements of the food have already been extracted and absorbed into the blood.

Ordinarily, when the colon is watched under x-rays no movements can be seen. And for many years it was a mystery how the waste matter ever reached the rectum. Patient observation by many investigators disclosed what happens. It was observed that movements occur in the colon in the great majority of cases only when food is entering the stomach, as with the ileum. In the ileum peristaltic waves occur. In the colon "*mass movements*" are produced. By these the contents of the colon are propelled onwards. One or two powerful waves of contraction occur and within 2 to 3 seconds some waste material in the ascending colon is transferred to the transverse and descending colon, from where it proceeds towards the rectum, ready for evacuation.

Herein lies the explanation of why the impulse to defecation is felt most frequently after a meal. Eating starts up the powerful reflex waves in the stomach. The waves run down the small intestine and empty the ileum. This in turn initiates the "mass movement", thus completing a continuous chain of reflex activity.

Now it happens that a long rest will leave the bowels in a very reactive condition, put them on a hair-trigger, so to speak. After such a rest they respond promptly and powerfully to a slight stimulus. This is the condition of the intestinal tract in a normal person after a night's rest, and it explains why most of us have a bowel movement in the morning after breakfast. It is the most favorable time for the act.

The discovery of the "mass movement" phenomenon in the colon was a revolutionary observation. Nothing like it had ever been observed before and it put to rest many absurd notions that had been entertained on the subject of the colon and constipation. Continued study of its characteristics revealed that, while massage of the belly, abdominal exercises and so forth will strengthen the abdominal muscles, they will not start a mass movement. No amount of abdominal punishment will initiate it. The chief stimulus, as we have noted, is eating. In some people drinking water or other fluids may be effective, too. Sometimes the sight, smell or taste of food will start a movement. And even thinking about food may start one.

One mass movement does not necessarily result in a bowel movement. Several are required to fill the descending colon. The waste material must enter the rectum and distend it before the desire to defecate is felt. When the desire is acceded to another coordinated reflex results which affects a long series of muscles from the throat down through the anus. This reflex not only empties the rectum but normally the entire sigmoid colon. The diaphragm descends, the muscles of the larynx close and the abdominal muscles contract. Waves of peristalsis now pass over the lower part of the colon, the muscular sphincter at the anus is relaxed and the stool is evacuated through the narrow anal canal.

It is in this final act only that voluntary effort comes into play. It is here that effective use of the abdominal muscles will help to produce a complete evacuation. Powerful muscles are not necessary. People with weak abdominal muscles are not necessarily

The Articles to Come

IT WAS originally intended to cover the subject of constipation and its treatments in one article. The idea for a series grew as the material to be covered grew. As planned now, the series will extend over at least three issues, and possibly four.

Questions to be taken up in the articles to come include the following:

Causes and types of constipation
Diet in relation to constipation
Influence of emotions and conventions on bowel activity
Autointoxication and other "symptoms" of constipation
Mineral oil, vegetable seeds, emulsions, enemas, etc. as treatments
Use and abuse of laxatives and cathartics
Dangers in prolonged use of drugs

constipated. But many instances of constipation are due to inefficient use of the muscles.

Dr. Hurst has pointed out that the best position for the bowel movement is the squatting position assumed in uncivilized life whereby the maximum efficiency in the use of the abdominal muscles is obtained. The high toilet seat commonly used in civilized life interferes with the proper application of voluntary effort. We shall apply this helpful observation in the discussion of the treatment of constipation.

IT IS commonly believed that the waste matter left after digestion has been completed is expelled 24 to 48 hours later. The fallacy of this impression was revealed in a crucial experiment that Dr. Walter C. Alvarez, another great investigator of the digestive tract, performed with Dr. Freedlander. They gave to healthy medical students sets of gelatin capsules containing many small glass beads. These were discovered to mix with the waste matter with no more influence on intestinal motion than the berry and fig seeds and bits of fiber found so commonly in the stool.

Astonishing results were noted. Normal young men with good digestions and daily bowel movements did not in 24 hours pass 100% or anything like 100% of the beads. There were two who passed about 85% in 24 hours, but most of them took 4 days to get rid of 75% and some passed only 50% in 9 days. Most of them passed about 15% on the first day and 50% more on the second.

Dr. Alvarez further observed that those who passed the majority of the beads in 24 hours—i.e., in what is considered the normal rate—had poor and badly digested stools. Those with a slower rate usually had well-formed stools showing evidence of good digestion. But some of these young men with slower rates and good stools had believed that they were constipated.

Dr. Alvarez has likened the colon to a railroad siding on which 3 freight cars are standing. Every day a new car arrives and bumps the end one off, leaving three again. But occasionally one arrives at the siding with such force that it bumps all three off, and then 3 days have to elapse before the siding is again full. This is what happens when you take a laxative or a cathartic. In other words, when the colon is cleaned out by a purge or large bowel movement, the call to stool should not be expected for 2 or 3 days.

HEXIN IN NEW JERSEY. HEXIN IN NEW YORK.

What you get when you buy Hexin depends on where you buy it. In New Jersey, and apparently in most other parts of the country, Hexin contains aminopyrine, a drug known to be responsible for more than 1500 deaths (see April Reports*). In New York City, which once prohibited the sale of aminopyrine and continues to limit it, Hexin is aspirin and antipyrine, a less dangerous compound. Midol, another proprietary, uses aminopyrine outside New York City, relies on aspirin within.*

FACT or FABLE?

This is a game for consumers and an educational test as well. Mark the following statements true or false. See page 31 for answers.

On the basis of a trial of this month's questions with 23 members of CU's non-technical staff, you will score high if you miss no more than 2.

1. Whatever may be said about the merits or demerits of alum baking powders, it is known that they tend to have a laxative effect.
2. Because so many deaths have been reported from the use of drugs containing aminopyrine, they may be purchased in most cities only on a doctor's prescription.
3. Unless the vegetable soup you buy has an appreciable amount of potato in it as a base, you may be reasonably certain that the soup's quality is inferior.
4. The best shaving creams not only soften the beard but tend to tone up the facial tissues.
5. If a porcelain interior finish for a mechanical refrigerator means a higher price, the expense is not justified.
6. Although metallic hair dyes are not safe to use, they are the only kind capable of actually restoring hair to its original color.
7. The chief difference between cold cream and cleansing cream is:
   a. Cleansing cream is less expensive.
   b. Cold cream prevents wrinkles.
   c. Cleansing cream is alkaline.
   d. Cold cream can nourish the skin.
   e. There is no difference.
8. Some bakers have increased the thickness of the slices in their sliced bread because they know thin slices dry out too quickly.
9. Hot-water bottles of Japanese manufacture are customarily inferior in quality to the American products.
10. The advantage of sunlight over cod-liver oil and irradiated foods as a source of vitamin D is that there is no danger of getting an overdose of sunlight.

AUTOMOBILE TRAILERS

AS SUMMER approaches the desire to get away from the humdrum, well-regulated life of the city seems to be common to a large proportion of the American people. Most families cannot take extended vacations in the north woods and live under the primitive conditions which such an outing entails. They are intrigued, however, by the idea of living in the one-room bungalow on wheels hooked on the back of the family car and trailed to sections of the country never seen before.

But the trailer represents a considerable investment. And the argument that it eliminates hotel bills is rather too readily accepted by those who do not stop to consider all the costs involved in its purchase and operation. Trailers require extras which raise the cost far above advertised list prices, and they furnish at best only sub-standard living conditions if used as permanent or semi-permanent summer homes.

As built at the present time they have many grave faults as vehicles for extensive travel. Some of these points will be considered here, although it is realized that when a person or a family has decided to "follow the sun" on a vacation trip, all of the hardships will not and probably should not be given too much weight.

AN AVERAGE trailer with standard living equipment and with mechanical equipment adequate to meet all road hazards and all legal restrictions costs as much as an automobile. And in comparison with the family car, it appears to be a poor investment from most standpoints. In all the high-flying publicity which the trailer has received, no one has ever ventured to state that a trailer will last as long as an automobile of equivalent cost, or go as far without falling apart. Depreciation on an automobile is high, and depreciation on a trailer will be higher still.

An item bearing upon the trailer's depreciation is the difficulty of garaging it. Unless accommodated in a barn, or paid for at dead storage rates in a public garage, the trailer which has been used for a vacation or a Florida winter must stand exposed to the weather for the balance of the year.

With half a dozen exceptions, trailers are built by companies which are taking a flyer on them, which have no engineering staffs worthy of the name, and no facilities for testing and improving the product except by trying it out on the public. The same was true of the automobile industry in its early days; during such a period, improvement is rapid and the resale value of obsolete models low.

A report on what to look for in a trailer, with specifications and ratings of 33 models.

On the basis of an estimated 1937 production of 100,000 trailers, the mass production methods which have created much of the value in automobiles can hardly be utilized to better the trailer or to lower its cost. The trailer *will* be made better by the application of engineering skill, and *may* be made cheaper as the total volume of at least 400 producers is concentrated in a few plants, but there is no reason for buyers to fear a spectacular undercutting of present market prices by some automatically fabricated miracle.

It seems certain that legislation will increase the amount of safety equipment which trailers must carry in the future, and therefore buyers should include such equipment, as mentioned below, in their purchases now. By doing so they will increase the value of their trailer in the second hand market as well as protect themselves on the road.

Whether the purchase of a house trailer is justified or not depends in the last analysis not on money values but on what these values come to in terms of living. What kind of living does the trailer provide? We quote two men who should know. One says, of the trailer as a home, "Apart from every other consideration, the lack of privacy and room would soon have the average family at one another's throats." The authority is Mr. Wolfe, president of Silver Dome, Inc. "What we're mostly trying to sell is a vacation," is the statement of Mr. Sherman, president of the Covered Wagon Co. (Both quotations from *Fortune*, March, 1937.)

The trailer does not have the general utility of an automobile, and buyers should make sure that the *definite* use to which the trailer is to be put will offset the heavy investment and the "design for living" which, as indicated below, it imposes.

THE average trailer interior is about 15–16 feet long, 6 feet 3 inches wide, with height over most of its floor area of 6 feet 2 or 3 inches. This gives a capacity of less than 600 cubic feet. Average housing codes specify 500 cubic feet as the minimum capacity of a room in which one person is to sleep. Most trailers are fitted to sleep 4, and the average number sleeping in them at trailer camps appears to be 3.

Only the upper-price group of the trailers rated below is equipped with toilet facilities. Where such facilities are included, they are restricted to chemical or septic tank toilets entirely within the vehicle, or with the septic tank located below the floor. As far as can be ascertained, the septic tank is

not restricted by legislation, and is to be preferred on all counts.

There are already many municipalities within which it is forbidden to use chemical toilets in trailers, and which require such toilets to be sealed while within the city limits. There is a practically universal regulation requiring tightly closed garbage cans for each trailer in which cooking is done. Drainage of icebox water to the ground is apparently unrestricted, but sink drainage in many camps must be either collected and dumped, drained into surface sewers, or spread over a wide ground area. Extra hose must be provided for this purpose.

Trailer water tank capacities run from 10 to 30 gallons averaging about 20. Nearly all tanks fill and drain from the outside, and the water is raised to the sink or handbasin by pumping. Bathtubs are an item of equipment only in luxury trailers; shower heads in toilet compartments with waterproofed walls cost less, but are not found within the price range covered in this article. More important is the provision of a faucet or two which can be connected with the pressure water supply of trailer camps.

One of the most serious trailer problems is the regulation of interior temperature through adequate ventilation and insulation. Dead air space in walls and roof is generally provided, but is insufficient by itself, particularly in the roof. Cotton padding is frequently used in the latter. It should be pointed out that any insulating material which can become saturated with moisture from leaks or from the condensation of moisture in trailer walls is unsuitable. Foil insulation appears to have some advantages but as installed does not have adequate heat insulating properties.

A trailer relying on dead air space for sidewall insulation should be examined to see how much true dead air space it has. Wardrobes and cabinet space frequently extend through to the outer skin of the trailer, and windows which drop into the trailer wall usually rob sections of it of insulating value. Drop or "automobile type" windows are apparently less satisfactory than those which hinge at the top. The latter can be left open when it is raining, and, with roof ventilators, better aid the circulation of air on windless days. Ventilators in pairs, and those which, as on *Silver Dome*, swivel to catch the wind, have obvious advantages.

Insulation of floors for warmth is seldom attempted. Experience in cool climates indicates the need of stoves which recirculate the air, or of air circulating fans, to maintain comfortable temperatures at floor level. Fans are often necessary also to prevent condensation of moisture on inner walls.

The floor, as well as the windows when closed, must be as nearly air tight as possible; the amount of dust which can enter the trailer while it is in tow is astonishing.

A simple vent to the outside above the cookstove is not sufficient; if much cooking is to be done, a ventilating fan set in the wall is desirable. Cool weather cooking, heating by coal, oil or gas, or lighting by gasoline lanterns, raises the problem of oxygen exhaustion. Some manufacturers are now installing heating stoves which take their air supply from outside the trailer.

ALMOST all trailers are advertised as "wired for 6-volt and 110-volt current." 110-volt current connections are available at most trailer camps, which charge moderately for their use, unless special current consuming fixtures are to be used.

One arrangement, employed by *Covered Wagon* and others, uses 6-volt equipment as standard, plus a transformer, which is low-priced and compact, to step down 110-volt camp current. This does not permit the use of toasters, water heaters, etc.; small 6-volt fans do not move much air, and 6-volt bulbs adequate to furnish reading light are expensive.

When 110-volt current is not available, the car storage battery must be relied upon, or a separate battery purchased for the trailer. The first method, besides greatly overloading the car battery, means a dark cabin if the tow car is disconnected. A trailer battery usually entails further expenditure for a wind- or wheel-charging device to charge the battery while the trailer is in motion.

Trailers are far from fireproof, and the presence in them of gasoline or kerosene for cooking stoves heightens the risk. For ease in cleaning and to lessen the fire hazard, cooking stoves should be set in metal-lined compartments or at least on a metal surface.

In one moderate-sized Florida trailer camp last winter there were 9 fires in 3 months, all traced to electric wiring defects, including overloading and particularly short circuits due to chafing and to the condensation of moisture in trailer walls. Such fires are difficult to reach with the fire extinguisher which should be part of every trailer owner's equipment. Insofar as possible, wiring should be inspected when a trailer is bought, and metal-armored 6-volt wire, together with B-X cable of at least 12-gauge for the 110-volt circuit, should be insisted upon.

THE trailer chassis should be constructed of steel for rigidity and strength. Metal body-framing is preferable to wood, but in any case cross-bracing and uprights which are well tied into the wheel housing structure are highly desirable. The amount of resistance to "weave" and "shake" afforded by the average trailer skin is small, whether the skin is of metal, metal bonded to plywood ("Shermanite"), or of non-metallic construction such as Masonite or leatherette-and-plywood.

The Biblical advice not to build on a shifting foundation holds for house trailers; the trailer frame must be as rigid as possible so that the completed structure will not weave, loosening its own joints and those of the cabinet work inside. At the same time, both frame and body must be light. For long trailer life, the requirement of rigidity comes first. Wood or wood-and-steel chassis frames should be accepted only as a last resort.

Use of steel does not guarantee correct design, however; maximum strength for the weight results from triangular bracing, as in bridge and automobile frame construction. Fortunately, triangles are easy to look for. The *Hayes* chassis and body framing is, in this respect, an excellent example for judging. Minimum requirements for chassis frames are that the drawbar pull must be transmitted through steel, riveted, bolted, or welded to steel, not to or through wood, and that the springs must be fastened to the frame in the same fashion. At the rear, the frame (or at least the body sides) should be curved up to keep the rear end of the trailer from striking obstructions when negotiating driveways, gutters, bad roads, etc.

In an attempt to keep their weight and cost down, trailer axles and bearings, usually bought by trailer companies from outside supply houses, have been grossly overloaded. The I-beam type of axle is the logical one to use, but square and tubular forms still predominate. If the axle is not of the I-beam type, it may not be rigid or strong enough for the trailer load. A weak axle will allow the trailer wheels to splay or spread apart at the bottom when the trailer is heavily loaded.

A CHIEF reason advanced by salesmen for metal exteriors is that the public is "steel-minded," presumably from reading automobile advertisements. At least one well-established manufacturer, with this in mind, offers steel-and-plywood exteriors (indistinguishable on the showroom floor from painted Masonite) at $100 extra. Since the public does not customarily ride in trailers—and in some states is breaking the law if it does—the comparison with "safety steel" automobile construction has little meaning. Exterior coverings should be considered solely for their efficiency as walls.

For non-commercial use, tempered Masonite (or similar oil-impregnated wood-fibre board) seems most satisfactory, followed by leatherette-and-plywood or steel or aluminum, with steel-and-plywood third, and canvas for sidewalls a poor fourth. Probably more important than the material is the tightness of joints or seams, and the ease with which small sections or panels can be removed for repair when damaged. Damage to walls will be reduced if rub-rails are provided on the trailer sidewalls.

Arrangement of storage spaces, closets and drawers in the trailer can be easily examined for convenience by the prospective buyer. Most trailer drawers are notched to hold them in place on the road. But door latches and hardware are often too light for the hard service they will receive. A waterproof drainboard is often lacking.

The interior location of larger units varies most in trailers designed for two people and in luxury vehicles selling at prices above those listed in this issue, but certain suggestions as to arrangement can be made. Placing the sink, icebox, and cooking stove along one side of the trailer generally allows

1937 Trailers

Code

A—Dead air space
Al—Aluminum sheet
Co—Steel frame (sheet steel below belt; plywood and fabric above)
CP—Cotton padding
F—Fabric
Fo—Foil
DD—Dum-dum
J—Jute
L—Leatherette
M—Masonite
P—Plywood
S—Steel
Sh—Shermanite (steel bonded to plywood)
Sp—Seapac
SS—Sheet steel
W—Wood

Make and Model	Price with Brakes	Length Over All	Total Weight Lbs.	Body Construction	Insulation Side	Insulation Roof
Group 1 ($400–$660)						
Silver Dome Hyway	$595	14′9″	1785	W—M	A	A
Pierce Travelodge C*	660	13′7″	2050	S—Al	DD—A	DD—A
Hayes 230	585	13′2″	1900	Co	Sp—A	Sp—A
Kozy Kaboose	550	14′9″	1650	W—M	A	CP
Covered Wagon Standard	560	17′0″	1800	W—Sh	A	CP
Trotwood Cub*	455	10′7″	1250	W—L—P	A	CP
Kozy Standard 18	638	18′0″	2120	W—M	A	CP
Trotwood Standard	565	13′0″	1600	W—L—P	A	CP
Schult Traveleeze De Luxe*	400	14′0″	1400	W—L—P	A	CP
Group 2 ($670–$860)						
Pierce Travelodge C	690	13′7″	2192	S—Al	DD—A	DD—A
Silver Dome Hyway De Luxe	675	14′9″	1865	W—M	A	A
Auto Cruiser 17*	745	14′0″	1970	W—M	A	CP
Hayes Motor Home 224	850	16′2″	2325	Co	Sp—A	Sp—A
Vagabond Standard 19	860	17′9″	2150	W—M	A	A
Federal Standard A	844	15′3″	2175	S—W	A	CP
Kabin Koach 57A	740	16′0″	1800	W—S	Sp—A	Sp—A
Covered Wagon Master	700	17′0″	2160	W—Sh	A	CP
Trotwood Master	670	15′0″	1800	W—L—P	A	CP
Kozy Standard 20	813	20′0″	2450	W—M	A	CP
York Cruiser Junior°**	700	13′1″	1700	W—L—P	A	J
Schult De Luxe°	760	18′0″	1800	W—L—P	A	CP
Palace Master	840	18′2″	2510	W—L—P	A	CP
Group 3 ($860–$1000)						
Hayes Motor Home 231	890	16′2″	2352	Co	Sp—A	Sp—A
Pierce Travelodge B De Luxe	895	16′6″	2541	S—Al	DD—A	DD—A
Silver Dome 18	965	17′4″	2550	W—S—P	A	A
Vagabond De Luxe 19	925	17′9″	2225	M	A	A
Federal De Luxe B	965	18′2″	2450	S—W	A	CP
Covered Wagon 3717 De Luxe	865	19′4″	1930	W—Sh	A	CP
Auto Cruiser 19	990	15′6″	2290	W—M	A	CP
Bender Travel Mansion 14	885	15′11″	2200	SS	Sp	Sp
Kabin Koach 75	947	17′0″	2300	S	Sp—A	Sp
Trotwood De Luxe	910	17′0″	2000	W—L—P	A	CP
York Cruiser Senior°	940	17′6″	2300	W—L—P	A	J

* Two passengers only, all others accomodate four passengers.
° Chassis frame, wood and steel—all others, steel.

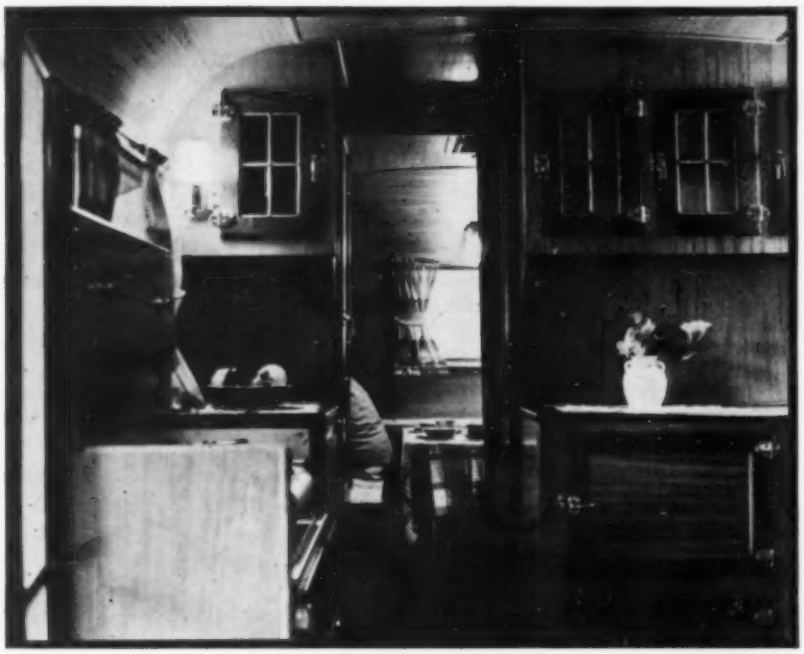


PHOTO BY CHARLES PHELPS CUSHING

HOUSE ON WHEELS.
Interior of a 2-room trailer.

•

a wider passageway down the middle. Such concentration of weight on one side of the trailer should be offset by a stiffer spring on that side (as in *York Split Coach Senior*); whether this has been done can sometimes be determined by counting the number of leaves used in the springs. Nails have no place in a trailer, which is subject to weaving and vibration; their use in garnish moldings is permissible, but all cabinet work should be screwed or bolted in place.

While the "dinette" arrangement—seats facing each other with table between, convertible into a double bed—is almost universal, and makes economical use of space, it has two serious drawbacks. The daily chore of making and unmaking the bed—the latter to be done before breakfast can be served—is arduous, and the bed is surrounded with the maximum amount of cold wall at night. It is possible to select a trailer to be occupied by two people in which a divan bed can be left made up without interfering with exit or entrance. A divan running lengthwise gives a reduced amount of wall contact.

IN ALL the literature of escape which has been written about the trailer, it is never pointed out that the overland motorist who hitches to his car a ton or ton-and-a-half semi-trailer (which is what the house trailer legally is) is escaping right into the transportation business. He is no longer driving a "pleasure car."

Standing as bought, the average trailer weighs about 1800 pounds, of which a portion—between 150 and 450 pounds—is designed to rest, via the drawbar, on the tow car. The weight carried by the drawbar may be increased or diminished according to how the trailer is loaded, and will vary constantly as the trailer is towed along the road, slows down, is drawn uphill, etc. It is easy to add 400 pounds to the trailer weight in the form of furnishings, water (20 gallons comes to 160 pounds), ice, coal or oil, clothing, and sundries. And this added weight will naturally affect the speed, riding and towing characteristics, and cost of operation of the tow car.

To avoid the need for carrying a spare tire for the trailer and to lower construction costs, trailers are customarily fitted with the tire most in use on cars—16 x 6.00. Since the maximum load for 2 tires of this size is 1800 pounds, if 4-ply, and 2000 pounds, for 6-ply, trailer tires are in practice very often overloaded. When, or before, a trailer is purchased it should be weighed; if, with an allowance for load, the above limits are exceeded, 6-ply tires should be demanded instead of 4-ply, or a larger size installed if wheelhouses and rim width will permit, particularly if the trailer is to cover long distances. Note in this connection that an ordinary automobile jack will not be strong enough to jack up the trailer safely for tire-changing.

In a few states, brakes are required by law if the trailer weighs more than 1000 pounds gross; in more states the legal limit is 1500 pounds gross; some states do not require brakes at all—at present. The legislative trend, however, is toward making the lower limit coincide with the unofficial judgment of experience—that any trailer weighing over 1000 pounds gross cannot be handled safely without brakes.

This figure has the approval of the Trailer Coach Manufacturers Association. Consequently, all trailers are rated below with braking equipment included, or with an addition to their price of $65 to cover brake installation. When brakes are installed at buyer's order, cast iron brakedrums instead of steel should be specified to avoid warping.

At present, installations utilize three types of operating mechanism for the brakes: vacuum, inertia, and electric. The electric brake is simpler for the manufacturer to install on both trailer and tow car and gives a connection between them which is easier to make and break. It is believed, however, that vacuum control is preferable because it is more widely serviced (having been used on trucks for many years), more powerful, and less affected by the extreme high temperatures developed in brake drums by long or severe braking. Inertia control, which applies the brakes whenever the trailer overruns the tow car slightly, is "Not Acceptable."

In order to relieve the tow car of excess drawbar weight, a few trailer manufacturers (*Silver Dome, Palace*) are mounting a third wheel under the nose of some of their models. Besides being forbidden in one state, and changing the legal status of the trailer in others (by making it a trailer instead of a semi-trailer), this construction introduces operating hazards which make it "Not Acceptable."

The task of jacking up, unhitching, and leveling a trailer is in most cases aided by use of a jack, with a dolly

wheel to be attached to it, which is built into or located near the drawbar. Corner jacks which are permanently attached to the trailer and swing down into use when needed—such as are available on *York Split Coach* trailers—simplify jacking operations and make them less arduous, but add to expense.

Other items of expense in equipping the trailer are: clearance lights, reflectors, flares, and safety chains necessary to meet legal requirements, with the addition in some states of directional signals to be operated from the tow car. For practical if not legal reasons, an outside rear vision mirror should be installed on the tow car despite any alleged ability to see to the rear through trailer windows.

EXACT information is not yet available as to what happens to the automobile which is used for towing a trailer over considerable distances. Most of what is said below checks with the experience of a large company (Parkhills Tours, Inc.) in running trailer tours.

Because the great bulk of automobiles these days are sedans, the location of the towing hitch is generally well to the rear of the tow car axle, which means that the added load on tow car rear springs is much more than just the drawbar weight. "Helper" springs should be installed if the weight at the hitch exceeds 275 pounds. These, of course, ruin the riding qualities of the towing car when the trailer is not attached to it, and cannot readily be removed when the trailer is not in use.

The hitch itself, which must be made to order for each car, and is not included in the trailer price, is a matter of importance. It must be welded or securely bolted to the car frame (bumper hitches being neither safe nor, in most states, legal for house trailers) preferably through reinforcing plates; and it must be capable of taking vertical, fore-and-aft, and transverse strains. Equally important is the matter of its location. To conform to proposed Society of Automotive Engineers specifications, the upper surface of the bracket on the towing car should be between 18 and 20 inches from the road with the car half loaded.

On commercial trucks, towing balls are always located a little forward of the rear axle. And this is the best position for the hitch in a tow car, if the car is of a type to allow it. (*Curtiss Aerocar*, most experienced of American house trailer makers, insists on this location.) As the location of the towing ball is moved toward the rear from this point, the distribution of weight, the transfer of weight when braking, and the ability to resist skidding or "jackknifing" all become progressively unfavorable.

These factors far outweigh any ability of the trailer to follow the tow car's path on corners, which is aided by locating the towing ball well to the rear.

Aside from the length of the tow car body, the location of the towing ball is affected by the need for a large angle between the trailer and the tow car axis (to allow for turning). For maximum maneuverability this angle should approach 90°. A trailer drawbar which is a wide triangle in plan does not permit as good a location of the towing ball as the "roman nose" type of construction used by *Vagabond*, *Silver Dome*, *Auto Cruiser*, and others. With the latter it is sometimes possible to locate the towing ball inside the tow car trunk space, a comparatively favorable location.

Six-ply tires should be used on the tow car, oversize if possible. But oversize tires have the effect of decreasing the gear ratio, which, for trailer towing, is the opposite of what is desired. When a new car is to be bought for towing, it should, if possible, be obtained with a higher-than-standard rear axle ratio.

The transmission gears, and particularly the clutch, will receive very hard service on a tow car. Extreme-pressure lubricants should be used in transmission and rear axle, if car specifications do not already call for them. The clutch must be handled with as little slipping as possible.

If a separate storage battery for the trailer is not used, or if the trailer battery is alternated with the car battery for charging, a generator capable of 25-ampere output, and preferably with automatic or hand operated voltage control, should be provided to charge the battery as rapidly as possible. An oversized battery in the tow car will help to carry the extra lamp load.

AS CONTRASTED with the ordinary passenger car operator, the driver of a tow car and trailer combination is not a carefree individual. Rough use of his clutch will simply destroy it. His ability to accelerate out of threatening situations is nil. He must use low and second gear much more than usual, yet avoid over-speeding his engine. Estimation of passing distances, clearance in turning corners, and perception of cars overhauling him from the rear, all require new driving habits. He may have a hand brake control and a directional signal control to operate. He must apply his brakes sooner, be sure that his trailer brakes go on first, and avoid locking any of three pairs of wheels, especially on wet or slippery roads.

The latter precaution is particularly important. When brakes are applied, a trailer-tow car combination is relatively unstable sidewise, but normally stops straight because of the resistance which rolling tires have to sidewise motion. Wheels which are sliding skid sidewise or forward with equal ease.

Renewals

Because postal regulations do not permit the insertion of a renewal notice which contains reference to membership, those whose memberships expire with the May issue will receive *subscription* renewal notices with this issue of the *Reports*. Renewal of subscription, of course, carries with it renewal of membership in Consumers Union.

Binders for Reports

A limited number of binders is still available to CU members for 50 cents. With "Consumers Union Reports" stamped in gold on the cover, they make a handy and handsome container for the *Reports*.

As many members have testified, the usefulness of the *Reports* is increased if back issues are thus kept for reference.

Annual Meeting

THE Annual membership meeting of Consumers Union was held last month in the auditorium of the Society for Ethical Culture in New York City. Close to 1000 members and guests attended the meeting, and heard Osmond K. Fraenkel, a director of CU, who presided as chairman; Jacob Baker of the President's Inquiry on Cooperative Enterprise (and a CU sponsor), who talked on Consumer Organization; Jonathan Eddy of the American Newspaper Guild, who spoke about consumers and labor; and several members of the CU staff, including Director Arthur Kallet, Technical Supervisor D. H. Palmer, and Staff Representative H. M. Southworth.

Those who came early saw and heard a sound movie of CU tests (see page 19). Those who stayed late participated in an active discussion over resolutions. Details of these, and of the other happenings at the meeting, will be the subject of a special report in the next (June) issue of the *Reports*.

The results of the members' voting on candidates for vacancies in the Board of Directors was also given out at the meeting. The four elected: Jerome Davis, Paul J. Kern, A. Philip Randolph (re-elected), Goodwin Watson.

Once the tow car wheels skid to one side, the trailer, unless it has sufficient retarding force via its own brakes, will skid to the other side, or "jack-knife." Such a skid is practically uncontrollable once it is started, and ends with collision between tow car and trailer.

A trailer may be pulled along a level road, in still air, with little effort; on hills, its resistance is proportional to weight and grade. Side winds and suction created by passing vehicles are definitely felt by the driver. Head winds, and wind resistance at high speed, are formidable; rounding off the upper front roof-line (*York, Trotwood, Kozy Kaboose*, etc.) may reduce this resistance somewhat, but the gasoline mileage of the tow car will be reduced 2 to 5 miles per gallon by the average trailer. Most cars develop their greatest pulling power between 25 and 40 miles per hour; there is therefore no point in "rushing" hills at a higher speed, and second gear should be used as soon as the car speed drops to 25.

THE ratings given below cover some of the more widely known makes of house trailers on which f.o.b. prices are less than $1000. There are undoubtedly good trailers the names of which do not appear because their production is small or has been recently begun, or because the product is a regional one, made and sold, for instance, only on the West Coast. It is believed, however, that with the aid of the general information given above such trailers can be judged with fair accuracy upon inspection; the fact that they do not appear in the lists does not necessarily indicate that they are "Not Acceptable."

The trailers in each of the three price groups are listed in approximate order of merit. The listings take into account weight, construction, balance, the opinions of users, and general interior layout, but are not based upon outward appearance, cabinet finish, trick features, or aesthetic appeal of interior arrangement and finish.

Group 1 ($400 to $660 f.o.b.) includes several 2- or 3-passenger trailers, and in general is composed of the smallest, lightest, and least expensively furnished models. Group 2 ($670 to $860 f.o.b.) includes many trailers of the same exterior dimensions as Group 3 ($860 to $1000 f.o.b.). Such models are usually cheaply furnished and equipped, but represent the maximum space for the price. Group 3 contains models which in general stand just below the luxury class.

The prices quoted are subject to extreme variation, due to the nature of the industry and to the variable equipment which they include. The figure ($65) covering installation of brakes represents several estimates of the cost of installation in the field, not at the factory, and will be subject to revision downward in some cases.

All of the trailers listed are designed to accommodate four passengers unless otherwise indicated. Chassis frame is constructed of steel, and trailer is equipped with one roof ventilator unless otherwise noted.

Group 1 ($400-$660)

Best Buys

Silver Dome Hyway (Silver Dome, Inc., Detroit). $595 with *Bendix* vacuum brakes. Equipped with 7 windows hinged at top.

Pierce Travelodge Model C—2-passenger model (Pierce Arrow Motor Car Co., Buffalo, N. Y.). $660 with allowance for brakes (*Bendix*). Equipped with 6 windows hinged at top.

Also Acceptable

(*In estimated order of merit*)

Hayes Model 230 (Hayes Body Corp., Grand Rapids, Mich.). $585 including allowance for brakes (*Warner* electric). Equipped with 6 windows hinged at top.

Kozy Kaboose (Kozy Coach Co., Kalamazoo, Mich.). $550 with brakes. Windows hinged at top.

Covered Wagon Standard Model 3713 (Covered Wagon Co., Mt. Clemens, Mich.). $560 with *Warner* electric brakes. Equipped with 8 drop-type windows. Tires somewhat smaller than on all other trailers listed here—15 x 5.50.

Trotwood Cub (Trotwood Trailers, Inc., Trotwood, O.). $455 with *Bendix* vacuum brakes. Accommodates 2 passengers only. Equipped with 6 drop-type windows.

Kozy Standard Model 18 (Kozy

Coach Co.). $638 with *Warner* electric brakes. Equipped with 7 windows hinged at top, and 2 roof ventilators.

Trotwood Standard (Trotwood Trailers, Inc.). $565 with *Bendix* vacuum brakes. Equipped with 7 drop-type windows.

Schult Traveleeze De Luxe (Schult Trailers, Inc., Elkhart, Ind.). $400 with allowance for brakes. Equipped with 7 windows hinged at top.

Group 2 ($670-$860)

Best Buys

Pierce Travelodge Model C—4-passenger model (Pierce Arrow Motor Car Co.). $690 with *Bendix* brakes. Equipped with 6 windows hinged at top.

Silver Dome Hyway De Luxe (Silver Dome, Inc.). $675 with *Bendix* vacuum brakes. Equipped with 7 windows hinged at top.

Also Acceptable

(*In estimated order of merit*)

Auto Cruiser Model 17 (Auto Cruiser Co. of America, Inc., Baltimore, Md.). $745 with *Bendix* vacuum brakes. Equipped with 9 drop-type windows, and 2 roof ventilators. Accommodates 2 passengers only.

Hayes Motor Home Model 224 (Hayes Body Corp.). $850 with *Warner* electric brakes. Equipped with 8 windows hinged at top, and 2 roof ventilators.

Vagabond Standard Model 19 (Vagabond Coach Mfg. Co., New Hudson, Mich.). $860 with *Bendix* vacuum brakes. Equipped with 8 windows hinged at top, and 2 roof ventilators.

Federal Standard Model A (Federal Motor Truck Co., Detroit). $844 including *Bendix* vacuum brakes. Equipped with 7 windows hinged at top.

Kabin Koach Model 57A (Kabin Koach Co., Pontiac, Mich.). $740 including *Bendix* vacuum brakes. Equipped with 7 drop-type windows.

Covered Wagon Master Model 3714 (Covered Wagon Co.). $700 with *Warner* electric brakes. Equipped with 8 drop-type windows.

Trotwood Master (Trotwood Trailers, Inc.). $670 with *Bendix* vacuum brakes. Equipped with 7 drop-type windows.

Kozy Standard Model 20 (Kozy Coach Co.). $813 with *Warner* electric brakes. Equipped with 7 windows hinged at top, and 2 roof ventilators.

York Cruiser Junior (Split-Coach Motor Corp., York, Pa.). $700 with allowance for brakes (inertia type brakes are normally installed by the manufacturer). Equipped with 5 windows, hinged at top. Accommodates 2 passengers only. Chassis of wood and steel construction.

Schult De Luxe (Schult Trailers, Inc.). $760 with allowance for brakes. Equipped with 9 windows hinged at top, and with roof ventilators. Chassis wood and steel.

Palace Master (Palace Travel Coach Co., Flint, Mich.). $840 with allowance for brakes (*Warner* electric). Equipped with 6 windows hinged at top, and 3 roof ventilators. Weight at drawbar excessive—400 lb., requiring helper springs on tow car.

Group 3 ($860-$1000)

Best Buys

Hayes Motor Home Model 231 (Hayes Body Corp.). $890 with *Warner* electric brakes. Equipped with 8 windows hinged at top, and 2 roof ventilators.

Pierce Travelodge Model B De Luxe (Pierce Arrow Motor Car Co.). $895 with *Bendix* brakes. Equipped with 7 windows hinged at top.

Also Acceptable

(*In estimated order of merit*)

Silver Dome Model 18 (Silver Dome, Inc.). $965 with *Bendix* vacuum brakes. Equipped with 7 windows hinged at top, and 2 roof ventilators. Weight at drawbar excessive—465 lb., requiring helper springs on tow car.

Vagabond De Luxe Model 19 (Vagabond Coach Mfg. Co.). $925 with *Bendix* vacuum brakes. Equipped with 8 windows hinged at the top and 2 roof ventilators.

Federal De Luxe Model B (Federal Motor Truck Co.). $965 with *Bendix* vacuum brakes. Equipped with 7 windows hinged at top, and 2 roof ventilators. Weight on drawbar high—350 lb.

Covered Wagon De Luxe Model 3717 (Covered Wagon Co.). $865 with *Warner* electric brakes. Equipped with 9 drop-type windows. Weight at drawbar excessive—410 lb., requiring helper springs on tow car.

Auto Cruiser Model 19 (Auto Cruiser Co. of America, Inc.). $990 with *Bendix* vacuum brakes. Equipped with 11 drop-type windows, and 3 roof ventilators.

Bender Travel Mansion Model 14 (Bender Body Co., Cleveland, Ohio). $885 with *Midland* vacuum brakes. Drop-type windows.

Kabin Koach Model 75 (Kabin Koach Co.). $947 with *Bendix* vacuum brakes. Equipped with 9 drop-type windows. Weight at drawbar high—350 lb.

Trotwood De Luxe (Trotwood Trailers, Inc.). $910 with *Bendix* vacuum brakes. Equipped with 7 drop-type windows, and 3 roof ventilators.

York Cruiser Senior (Split-Coach Motor Corp.). $940 with allowance for brakes (inertia-type brakes are normally installed by the manufacturer). Equipped with 6 windows hinged at top, and 2 roof ventilators. Chassis of wood and steel construction. Weight at drawbar high—350 lb.

CAUSE and EFFECT

The story of a CU campaign and some of its results, as told by items from the file labeled "Mineral Oil Nose Drops"

1. (Excerpt from the directions in the container of a well-known brand of mineral oil nose drops.)

"Hill's Nose Drops is safe for children as well as for adults . . . can be used freely, with absolute safety."

2. (Excerpt from an article on mineral oil nose drops in CU Reports, *December, 1936.)*

"For many years medical evidence has been piling up that mineral oil dropped into the noses of children, especially very young children, may be drawn into the lungs. There it collects, causing irritation, inflammation, and chronic pneumonia. The sequel is often acute pneumonia and death. . . .

"Nose drops have not even the justification that they will prevent or cure colds. . . ."

3. (Excerpt from a member's letter following the article in the Reports.)

. . . I deplore your recent excursion into the field of controversial therapeutics in connection with the use and abuse of mineral oil in nose drops and sprays. In my opinion it is not within the proper sphere of Consumers Union to enter into a controversy of this sort and I hope it will not be continued. . . .

4. (Excerpt from another member's letter following the article in the Reports.)

I have read the reports on nose drops . . . it is a service to me, a physician, to have their danger emphasized.

This morning I visited the medical library at the Harvard Medical School and searched the literature on the question of lipoid pneumonia. Going back only 2½ years I found seven references to the subject. . . . The conclusions of the writer are certainly in harmony with and support your stand. . . . My respect for Consumers Union is increased.

5. (Excerpt from a letter from CU to the Commissioner of the Department of Health, New York, N.Y. Similar letters were sent to the Departments of Health of nine other large cities.)

. . . Although the manufacturers of many brands (such as *Vicks Va-tro-nol*, *Pine-oleum*, and *Mistol*) recommend their products as safe for children, competent medical research has established the fact that the use of mineral oil nose drops is a leading cause of lipoid pneumonia in children. . . .

Consumers Union is conducting a survery to determine what steps have been taken, or will be taken, by health departments of large cities to halt this needless waste of children's lives, a consequence of fatally false advertising. We shall appreciate having your answer.

6. (Excerpt from a letter to Mr. Percy S. Straus, President of R. H. Macy & Co., New York, N. Y.)

. . . Since our analyses show that *Macy's Nose Drops* contain mineral oil, it is clear that the continued sale of this product may cause the deaths of many children. . . .

Will you inform us whether your company will continue the sale of this product?

7. (Letter to CU from Alma W. Fraas, Secretary to the Commissioner of Health, New York, N. Y.)

Acknowledgment is hereby made of your letter of January 12th. It will be brought to the attention of the Commissioner of Health.

8. (Excerpt from a letter to CU from Mr. Howard Otten, Executive Vice-President, R. H. Macy & Co.)

Your letter of the 12th inst. addressed to Mr. Percy S. Straus, President of R. H. Macy & Co., Inc. was referred to me for reply. We thank you for calling to our attention the statements of medical authorities in relation to the use of mineral oil in nose drops.

We assure you that we will make a prompt investigation in this connection. . . .

9. (Excerpt from a letter to CU from Dr. Herman N. Bundesen, President of the Board of Health, Chicago, Ill.)

In reply to your letter . . . please be advised that in our study, recently completed, of the causes of death in newborn infants, we did not find, in any instance, any evidence that, in babies under one year of age, death occurred from pneumonia as the result of nose drops. . . .

10. (Excerpt from a letter from CU to Dr. Bundesen.)

Thank you for your letter . . . in answer to ours on the subject of deaths from mineral oil nose drops. . . .

It will be clear to anyone going over the medical reports that the ordinary autopsy does not disclose the presence of mineral oil in the lungs. It is discovered only when the physician performing the autopsy is aware that mineral oil can be a factor in the etiology of lipoid pneumonia and makes special microscopic examinations.

May we ask, therefore, on behalf of our many Chicago members, that you investigate this matter further and take whatever steps are necessary to curb the sale of mineral oil nose drops in Chicago stores?

11. (Excerpt from a letter from Dr. Henry Vaughan, Commissioner of the Department of Health, Detroit, Mich.)

Your letter of January 12th . . . duly received.

. . . the careless use of any medication may do harm. It would seem to this department that your attack would be stronger if it were directed to the careless use of drugs, especially without medical direction. There is no objection to concentrating on drugs used in the upper respiratory tract, but why select mineral oil which is the bland vehicle of some preparations . . . ?

12. (Excerpt from a letter from Mr. Howard Otten of R. H. Macy & Co. to CU.)

After receiving your [first] letter . . . which we acknowledge . . . we made an investigation of our product, "Macy's Nose Drops." We concluded that it would be desirable to state on the labels of these nose drops the following language . . .

"Not to be used for infants or small children except by physician's direction."

We again assure you that we appreciate the information. . . .

13. (Excerpt from a further article in CU Reports, *March, 1937, on the subject of mineral oil nose drops.)*

". . . That members and their physicians both may be able to judge more fully the validity of what we say [about mineral oil nose drops], we present here a digest of opinion by additional authorities. . . ."

14. (Letter from a member.)

Just one (1) more article on nose drops and my wife will request you to rush her information concerning coffins!

15. (Excerpt from a member's letter.)

As a subscriber of the Union and as a pediatrician, . . . I heartily endorse your campaign against the instillation of mineral oil drops in the nose, in children and infants particularly. . . . Intelligent pediatricians always employ "nasal drops" in aqueous solution only.

16. (Excerpt from a letter to CU from Dr. William H. Best, Deputy and Acting Commissioner of Health, New York, N. Y.)

In further reference to your communication . . . relative to lipoid pneumonia following instillation of mineral oil nose drops, may I advise you that the matter was presented to the Board of Health at its meeting on March 9, 1937. The board directed that such action be taken as is deemed necessary to inform the public concerning the risk and hazard of the use of oil nose drops in the treatment of infants.

The matter has, therefore, been referred to the Bureau of Public Health Education for this purpose.

17. (Excerpt from a bulletin issued to the medical and nursing personnel of the Health Department by Dr. Charles F. Bolduan, Director of the Bureau of Health Education, New York, N. Y.)

In recent years, largely as the result of commercial advertising, there has been an enormous increase in the use of various oily preparations for application to the nasal passages.

In infants such applications are not free from danger, for experience has shown that the oil may be drawn into the lung and give rise to a fatal pneumonia. For this reason most pediatric services now prohibit the use of oily substances in the nose of infants under two years of age.

Fatal cases of pneumonia caused by the aspiration of oily preparations into the lungs have been reported in American medical literature since 1925. The number of cases of this form of pneumonia is undoubtedly far greater than the number of fatal cases reported in the literature. . . .

Following are some excerpts from authoritative sources:

Dr. Douglas Symmers, General Director of Laboratories, Bellevue Hospital—"The evidence is sufficiently strong to say that the indiscriminate introduction of oily substances into the nose should be stopped. It is a definite health problem."

Dr. Paul Klemperer, Pathologist, Mt. Sinai Hospital—"The condition is now being found with increasing frequency at autopsy. Occurs in adults as well as children. The condition constitutes a public health menace."

Dr. Rustin McIntosh, Professor of Pediatrics, College of Physicians and Surgeons, Columbia University, and Attending Pediatrician, Babies Hospital—"There is enough evidence to warrant an educational campaign against the use of oil in noses of infants up to two years of age. The use of nasal oil drops for this age group has been virtually abandoned in hospital and dispensary practice at the Columbia-Presbyterian Medical Center."

Dr. Bela Schick, Director of Pediatrics, Mt. Sinai Hospital—"The condition is sufficiently frequent to prohibit the use of oils in the noses of infants."

Dr. Herman Schwarz, Director of Pediatrics, Beth Israel Hospital—"The use of oil drops in the noses of infants should be banned."

Dr. Charles A. Weymuller, Professor of Pediatrics, Long Island College of Medicine—"I feel very definitely that your campaign to point out the harmful effects of oily nose drops is a very praiseworthy one. We have seen a great many more lung disturbances due to oily irritations than ever before."

18. (Letter from a member.)

I read in today's paper that the New York Board of Health has come out in support of your courageous stand in regard to "nose drops" for children. Congratulations!

(Not included here are letters from CU to numerous publications which carry advertising for these products and to the manufacturers. Most of these letters remain unanswered.

But CU's fight is far from over. The highly commendable action of the New York City Board of Health should be followed by similar action on the part of health departments throughout the country. In the months to come CU will endeavor to see that it is.)

NEW YORK
Herald Tribune

Keep Oil Out Of Baby's Nose, Doctors Warn

Health Board Sees Danger of Lipoid Pneumonia in Use of Oily Substances

The Board of Health warned yesterday against the application of any oily preparations to the nasal passages of babies less than two years old. Inhalation of the preparations to the lungs may result in lipoid pneumonia, which frequently proves fatal, it was said.

The board also warned against frequent use of cod-liver oil and creams. No mother, the board warned, should try to feed cod-liver oil or any oily preparation to a rebellious or feeble infant, as an inhalation of the oil may result in an acute pneumonia. A bulletin of

The New York Times

DR. RICE OPPOSES USE OF NASAL OILS

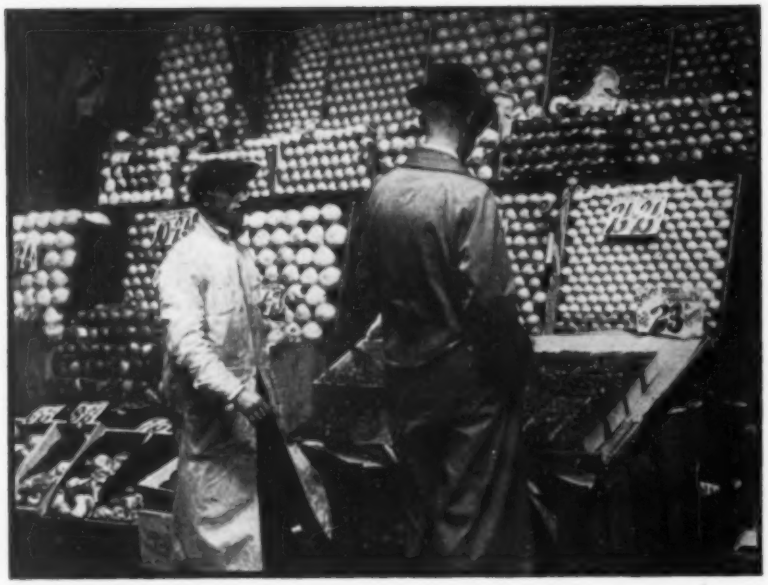
Holds Substances May Get Into Lungs and Cause Pneumonia, Especially Among Infants

The Health Department issued a general warning yesterday against the use of nasal oil to relieve respiratory congestion on the ground that such preparations frequently lead to lipoid pneumonia, particularly among infants.

Health Commissioner John L. Rice ordered the warning distributed among the medical and nursing personnel of the Health Department.

"In recent years," he said, "largely as a result of commercial advertising, there has been an enormous increase in the use of various oily preparations for application to the nasal passages. In infants, such applications are not free from dan-

Clippings from two New York papers of April 20th, 1937.



FRUITS and

Some forecasts
some pointers on
some notes on ha

THE time was, and not so many years ago, when spring vegetables —to Northerners at least—meant in May only a few early garden items: asparagus, lettuce, radishes, green onions. Products grown early in the hot-house, or imported from warmer climates, were an expensive luxury for the tables of the well-to-do.

With improvements in transportation and the development of large-scale market gardening in Arizona and California, Texas and the other Southern states, the situation has changed. Such late-spring or summer products as peas and string beans, cabbage, carrots, beets, and spinach make their appearance throughout the country early in spring. And by May they are sufficiently plentiful to be within the reach of meagre pocket-books.

Strawberries from Louisiana fields and tomatoes from Florida likewise appear in quantity in May as a variation from the oranges and grapefruit which are the winter's staple fresh fruits. By the end of the month even southern canteloup and watermelon begin to show up on the stands.

This spring predictions are favorable for crops larger than last year's in Southern-grown *cabbage, beets, spinach, new potatoes,* and *strawberries.* Weather conditions have damaged *tomatoes* and *string beans,* and lower-than-last-year production is forecast also for *carrots* and *peas. Lettuce* supplies are expected to be smaller than last spring, but even so larger than average. Acreage devoted to *watermelon* and *muskmelon* is larger than a year ago, but neither of these crops is expected to be shipped in any great volume until June. Peaches for canning, grown largely in California, are expected to be relatively plentiful, but *eating peaches,* which come mainly from Georgia and other Southern states, have been damaged by late freezes, curtailing early supplies.

These crop forecasts do not necessarily mean that cabbage and beets will be dirt cheap while peas and carrots will be out of the reach of ordinary pocket-books. They do, nevertheless, give some indication of the fruits and vegetables for which comparatively favorable prices may be anticipated. They are always, of course, subject to change without notice depending on the vagaries of weather, which can unexpectedly make 20% greater acreage produce 20% fewer bushels.

POSSIBLY more valuable than predictions as to quantity are pointers as to quality—how to judge the different fruits and vegetables, and how to use them so as to make the most of the food values they offer. For, aside from variety, their importance in the diet lies in the minerals and vitamins which they supply. And to provide these constituents of the diet, the fresh spring products should be bought in proper condition, and properly stored and cooked after purchase.

Many fresh fruits and vegetables shipped in interstate commerce are now graded according to standards set up by the Bureau of Agricultural Economics of the U. S. Department of Agriculture. Unfortunately, this grading is of little help to consumers who buy over the counter, since it is only in the wholesale markets that most of the produce is sold by grade. Where the original container of the produce —the bag or crate in which it was shipped—can be seen, the consumer may get some clue to quality of the contents and the comparative price they should command. But even here accuracy of labeling depends on the inadequate inspection facilities of the Food and Drug Administration.

Consumers must remember, however, that perishable food-stuffs do not necessarily stay at their original grade level. A container marked with a high grade may have so suffered in transportation and storage that its contents no longer live up to the mark on the label.

Consumers can learn something about buying from a study of points covered in government grading, since the prices which products should command are largely determined by the quality grade to which they measure up. For certain uses the consumer may find it worth while to buy lower than top grade produce; but he should make sure that he is not paying top grade prices for it.

U. S. No. 1 grade cabbage, for example, must have heads reasonably solid (solidity varies to some extent with the variety), not withered, puffy, or burst; and free from soft rot, seed stems, and damage caused by discoloration, freezing, disease, insects, etc. The head must be trimmed so that only four leaves at the most fail to enfold the head fairly tightly. No. 1 "green cabbage" may have as many

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PHOTOGRAPHS TAKEN FOR CU BY JOHN MILLS

as 7 such leaves. The stem must not project more than one-half inch beyond the point of attachment of the lowest leaves at the bottom.

Cabbage which does not meet these standards is called *Unclassified*. Such heads obviously may be less well-kept than *No. 1* grade (and therefore lower in vitamin C content), or they may have defects which will involve more or less waste in use—soft spots, worm holes, extra outer leaves which must be trimmed off, etc. Or they may have defects simply in appearance, which involve little or no wasteful trimming away and do not affect the nutritive qualities of the cabbage.

Peas are graded *U. S. No. 1* if the pods are not excessively small, badly misshapen, or watersoaked; are fresh, tender, firm, and fairly well filled (more than one-half of each pod must be filled with peas at least fairly well developed); and if they are free of dirt, leaves, and other foreign matter and not damaged by disease or insects. *No. 1* is actually second grade for peas, however; those which meet all of these specifications and in addition are well filled (more than two-thirds of each pod filled with peas at least fairly well developed) are graded *U. S. Fancy*. Peas not graded in conformity with either of these standards are *Unclassified*.

Here again the standards cover such points as freshness and freedom from waste, along with adulteration with water or dirt which would increase the weight for which the consumer pays.

Grade standards have been developed for practically everything from "Anise, sweet" to "Watermelon." A handbook giving them in detail and defining the terms used in them can be obtained for 15c from the Superintendent of Documents, Washington, D. C. Ask for USDA Miscellaneous Publication No. 190: "Handbook of United States Standards for Grading and Marketing Fresh Fruits and Vegetables," prepared by the Bureau of Agricultural Economics. (See the 1937 CU Buying Guide, page 7, for method of ordering.)

Another publication of this bureau, intended primarily for consumers rather than for the trade, is "A Fruit and Vegetable Buying Guide for Consumers," by R. G. Hill (USDA Miscellaneous Publication No. 167, 5c from Supt. of Documents).

The Consumers' Counsel Division of the AAA includes in its magazine, *Consumers' Guide*, articles describing the production and marketing of various fruits and vegetables in season, the characteristics by which their quality may be judged, and ways of preparing them to make the most of their food values. This magazine, which contains interesting articles in many consumer fields related to agricultural products, is sent free of charge to any who write to the Division requesting it. The Division also issues for consumer organizations a *Consumers' Market Service*, leaflets giving latest reports on expected production and anticipated price changes of fresh fruits and vegetables and meats.

A FEW notes on the handling and preparation of the spring vegetables are in order. Research has shown that their content of vitamin C—of which green vegetables are usually good sources—is rapidly lost on storage at room temperatures. Hence green vegetables which are not to be used promptly should be kept in a refrigerator if possible, or at least in a cool place. Earlier laboratory investigations indicated that cooking also largely destroyed the content of vitamin C—one of the reasons for the vogue for eating raw vegetables. Later tests have shown, however, that, while some of the vitamin C is destroyed, especially in prolonged cooking, much of the vitamin previously supposed to have been lost is actually taken up by the water in which the vegetables are boiled (along with valuable mineral constituents). The best current advice, therefore, is to cook the vegetables as rapidly as possible, letting water come to a boil before they are put into it, and to use only as much water as is necessary to make sure that the vegetables do not boil dry. Wherever possible, the water in which they have been boiled should not be thrown away, but saved for making soups, etc. Addition of soda, while it preserves the green color of vegetables, destroys vitamin C.

It has frequently been recommended by authorities on cooking that green vegetables be cooked in an abundance of water in order to preserve the green color. It is not necessary to do this. If the saucepan is left uncovered for a few minutes after the boiling has commenced, the acids which destroy the green coloring matter will escape,

and the color will be well preserved. Large saucepans which permit the green vegetables to be cooked in rather thin layers also help to conserve the color. In this way it will not be necessary to cook vegetables in large amounts of water which cannot be utilized, with consequent loss of valuable minerals and vitamins.

Investigations have shown that the vitamin content of green vegetables increases with the greenness—that the outer, green leaves of lettuce, for example, contain as much as 30 times as high a proportion of vitamin A and B as the inner white leaves. With peas, vitamin content varies with the variety and the age. Tender young peas are richer in vitamin C than older, riper ones. Housewives frequently prefer the large-pod varieties of peas, since they can be shucked faster. Tests show, however, that the small-pod varieties, when grown side by side with the others, have an appreciably greater content of vitamin C.

Tomatoes, likewise valued for their vitamin C, are usually picked green and ripened in storage or under transportation. Only when they are available from local growers are they likely to be vine-ripened. Those picked green and ripened in the markets are usually less juicy, and probably are lower in vitamin C content. In buying tomatoes remember that "catfaces" or scars on the skin of the fruit are objectionable only through causing waste in use. Tomatoes with odd shapes are satisfactory for many uses but should command a lower price than those of symmetrical contour.

A number of "greens" have come into use as spring vegetables in recent years: swiss chard and beet tops, turnip tops, and such "weeds" as dandelion and mustard. Meanwhile, spinach, staple "health food" of text books on nutrition, may be less desirable than was previously thought. Researches announced through Yale University last fall indicate that, while spinach does contain comparatively large proportions of calcium and iron, needed for blood and bone building, an appreciable part of its content of these minerals is in such form that it may not be absorbed by the body. Doctors also point out that the considerable amount of roughage in spinach makes it undesirable for many persons whose digestions are delicate.

Excerpts from the News

Distinguished Servant

AN ADVERTISING trade paper has awarded Katharine Fisher, director of the Good Housekeeping Institute, a silver medal for "distinguished service to advertising." We find this most appropriate. There can be no doubt that Miss Fisher's Institute has done its very best in the cause of advertising, even down to pinning the Good Housekeeping Seal of Approval on a wide variety of worthless products.

Now that her allegiance is thus officially made clear, *Good Housekeeping* should (but won't) stop representing the Institute as a servant of the consumer. For its services in that direction are rather less distinguished.

Good Grant

THE Committee on Scientific Research of the American Medical Association has made a grant to Irving Graef of New York University for study of "pulmonary reactions to instillation of lipids and mineral oils" (i.e., the effect of fatty and oily substances on lung tissue). In light of the lack of adequate medical data on this subject, the project is important.

New Group Plan

STARTING with the current issue (May, 1937) CU group members will receive their *Reports* individually, an improvement in mailing service made possible by the increase in group membership—now close to 6,000.

If you are a group member, make sure that your correct mailing address is in the CU office as soon as possible. When writing, mention the name of your group and your leader.

Rates for group membership are now $2 for the complete edition and 60c for the limited edition, including the *Annual Buying Guide* in each case. These rates are offered to groups of ten or more. Send for a new group blank if you are planning to start a CU membership group.

As Consumers Union has pointed out several times over the past months in its campaign against mineral-oil nose drops, the dangers inherent in the indiscriminate use of such products have been amply demonstrated. But more information is needed to show just how far those dangers extend. As

a step toward that end, and as an indication of growing professional interest in a field that has been rather neglected, the AMA's grant is a good one.

How Much Is 6%?

THE Federal Trade Commission has drawn agreements out of 7 automobile manufacturers and 3 financing companies to the effect that they will stop their very misleading advertising of the "6%" financing plan. The plan is simply an arrangement for paying financing charges; but whoever has bought a car on time within the past year and a half or so has had an opportunity to discover how blatantly deceptive its advertising has been.

Some companies exploited it more than others, but with all of them the formula was roughly the same. On the one hand, big 6% signs and misleading phrasing gave the prospective car buyer to understand that the simple interest rate on his financing would be 6%. On the other hand, insignificant explanatory matter or none at all prevented him from knowing that while he would indeed pay 6% he would pay it on the full amount right up to the last payment, which meant an actual rate of about 12% per annum.

Only two companies acted against by the FTC have refused to file agreements. But those two are General Motors and Ford. They may contest the proceeding. You can't accuse them of giving up a good thing without a fight.

Demotion for Webster

IN DECEMBER, 1936, the *Reports* rated *Webster* tomato juice as "good quality." The rating was based on tests made for Consumers Union by the Grading Service of the United States Bureau of Agricultural Economics which gave this product a score of 91.

Now comes the news, in the April, 1937, *Notices of Judgment* of the Federal Food and Drug Administration (Notice No. 26422), that 1250 cases of *Webster's* tomato juice were condemned and destroyed because the product consisted "in whole or in part of a filthy, decomposed, and putrid vegetable substance."

The samples graded by the Bureau of Agricultural Economics for Consumers Union were purchased in retail stores some months later than the date of the Food and Drug Administration seizure (August, 1936). Whether the canner, G. L. Webster Company, improved the product after the seizure, or whether its inspection is so poor that some shipments are good and others bad, we do not know; until future tests have shown the product's current status, it must be demoted to the class of *Not Acceptable.*

CU in the Movies

THE Film and Photo League has completed a novel sound film showing actual tests by CU technicians on shoes, milk, and lead toys. Entitled "Getting Your Money's Worth," it answers graphically many of the questions CU's staff constantly receives: "How are your tests really made?," "How can you tell which brands are best buys?," etc., etc.

The film was first shown at CU's annual membership meeting last month (see page 12). It is now available to any interested organizations. It may be obtained—either 16mm. or 35mm.—from the Film and Photo League, 220 West 42nd Street, N. Y. C. Rental is moderate.

MOTH *Preparations*

A Discussion and Ratings of Various Types

"DAINTY pink, lavender, and light green hexagonal, perfumed naphthalene blocks with small wire molded in them for suspension purposes, wrapped in Cellophane" were recently placed on trial by the U. S. Food and Drug Administration. The Administration, apparently untouched by the daintiness of the accused, charged that "the product used as directed, was worthless for the control of moths." The court agreed, convicted and fined the Exo-Nox Company of Cincinnati, its manufacturer. But lest any CU member should draw the mistaken conclusion that he is fully protected from worthless "moth killers" by the government, we are constrained to add that the fine imposed was $10—a sum which the company can easily recover by selling the "dainty pink blocks" to a few dozen more unwary consumers.

Despite intermittent and half-hearted action by the Food and Drug Administration and another government agency, the Federal Trade Commission, the coming of Spring this year brings as usual a flood of moth products, some effective, many worthless, to engulf the bewildered buyer.

Although a multitude of new products advertised in glowing terms are on the market, the old-fashioned "moth ball," composed of a coal tar product known to chemists as *naphthalene*, is still, if properly used, one of the best preventives. A more recent chemical discovery, *para-dichloro-benzene*, is equally efficient, and its odor is, perhaps, less objectionable. *Gum camphor* is also good, but more expensive. To be effective, each of these substances must be used in adequate amount (1 pound for each 100 cubic feet is enough, according to recent advice from government authorities) in a *tightly sealed* chest, drawer, bag, trunk, or closet. If you are not sure the space is tightly closed, use a larger quantity. When used in a frequently opened closet all of these substances are worthless—so are all commercial devices to be hung in closets, under these conditions. The mere odor of "moth balls," "para," or camphor will *not* repel moths. The solid "moth balls," etc. actually vaporize, and this vapor must be sufficiently concentrated to kill the larvae. This explains their lack of effectiveness in any but closed spaces.

Sprays of the *Flit* type (kerosene-pyrethrum), while very popular, are not dependable against moths as they are ordinarily used. To be effective, they must actually come in contact with the insects. Enough must be applied to saturate the fabric, otherwise some larvae may be missed. On a light fabric this can be done and is substantially equivalent to dipping. The tendency, however, is to spray too lightly. A heavy fabric cannot be saturated by a reasonable application of the spray from one side. Therefore spray types of moth-proofing agents are not recommended as ordinarily used.

Moth sprays of this type are similar to fly sprays but should be made of special grades of kerosene which will not stain fabrics; many moth sprays will cause stains.

Various solutions are sold into which fabrics are to be dipped for moth-proofing. The most common type contains about ½ percent of a fluorine compound in water. While not completely permanent, such treatment does make the fabric resistant to moths. The same solutions (sometimes in a different concentration) are also sold for spraying, and their effectiveness is then dependent on the care used in application. No completely permanent method of moth-proofing fabrics has been discovered. Most moth-proofing

treatments must be repeated after washing or dry-cleaning.

The use of fluorine compounds, which are poisonous if taken internally, involves some hazard in the handling of the solutions. The concentration on the treated clothing is so small as probably not to be harmful.

The following suggestions will help in dispensing partly or wholly with insecticides, or in making their use more effective:

1. Garments in constant use are seldom attacked by moths.

2. Cleanliness and sunlight are the enemies of moths. Grease spots on woolen garments are most subject to attack. Frequent brushing, sunning, and washing or dry-cleaning of garments help to prevent moth damage. Frequent vacuum-cleaning will help safeguard rugs.

3. *Tightly sealed* bags or packages will keep moths out, but will do no good if moths (or their eggs or larvae) are inside to begin with. Wool garments to be stored should be washed or dry-cleaned (or at least brushed and sunned) immediately before putting in bags or packages. Use gummed paper tape to seal up every opening. "Cedarized," treated, or fancy smelling bags are no better than others. Wrapping paper or newspaper will do if the package is tightly sealed. A little naphthalene or paradichlorobenzene in the bag or package will give added insurance against moth damage.

4. Cedar linings in ordinary closets give only slight protection. Tight cedar chests lined with red heart wood may be of value for a time.

Information on moths was given in CU *Reports*, June, 1936, and more is included in the 1937 *Buying Guide;* but listings are superseded by those given here.

Best Buys

Naphthalene flakes or balls ("moth balls"). About 15c a lb. Use 1 lb. for each 100 cu. ft. in a *tightly sealed* chest, closet or other space. (If there is doubt as to the airtightness of the compartment, use a larger quantity.) Place above or between clothing.

Paradichlorobenzene flakes. About 50c a lb. Sold by Merck & Co. under trade name ***Di-chloricide***. Use in same manner as naphthalene. (Available from Cooperative Distributors, 30 Irving Place, NYC; 3-lb. can, $1 plus postage.)

Also Acceptable

Gum camphor. About 75c per lb. Break into small pieces and use in the same manner as naphthalene. See above.

Kerosene-Pyrethrum sprays such as ***Flit, Flytox.*** Effective only on contact with insects. May stain some materials. Full efficiency requires saturation of the garment, which may leave residual odor. Power spraying only is effective; hand spraying will not penetrate the garments.

Rinsing Larvex. For treatment of fabrics by immersion. ***Larvex*** used as a spray is less dependable unless very thoroughly applied.

Konate. Effective if applied by immersion or *thorough* spraying.

Fumigation. For large-scale extermination of moths, fumigation with hydrogen cyanide is effective, but this *very poisonous* gas must be used only under expert supervision. A recently announced process using carbon dioxide from "dry ice" should be effective but also requires expert supervision.

Cold storage, if properly controlled, gives effective protection, but is usually expensive.

Work in Progress

CU MEMBERS who have been suggesting subjects for coverage in the *Reports* may be interested to know that material on the following is planned for appearance in the course of the next few months.

COFFEE
ELECTRIC FANS
RAZORS and *RAZOR BLADES*
SANITARY NAPKINS
CONSTIPATION (further articles in the series beginning with this issue)
BATHING SUITS
CAMERAS and *EQUIPMENT*
BAKED BEANS
SUNBURN PREVENTIVES
PORTABLE TYPEWRITERS
WASH DRESSES
CIGARETTES and *TOBACCO*
COOPERATIVE MEDICINE (with special reference to the work of the newly formed Bureau of Cooperative Medicine)
1937 MECHANICAL REFRIGERATORS
CANNED PEACHES
CANNED TOMATOES
INSURANCE (several articles on various types of insurance by an authority in the field)
ELECTRIC CLOCKS
GASOLINE and *MOTOR OILS*
GOLF BALLS
TENNIS BALLS and *RACQUETS*
ICE CREAM
SHOE WHITENERS
INNER TUBES

In addition to these specific projects, work on most of which is already well under way, there will be various articles on developments in consumer legislation; special articles on the fight for food and drug legislation; and general coverage of newsworthy developments in the consumer field as they arise. Editorials, the letter page, "Fact or Fable?", and the news department inaugurated in this issue will continue to appear. New features are being worked out to extend further the *Reports'* usefulness and readability. Any suggestions that members may have in this connection will be welcomed.

Meantime, CU's staff will appreciate it if CU's members do not ask for special, advance information on the reports planned. Neither time, accuracy, nor fairness to other members allows such information to be given.

Not Acceptable

Devices to be hung in the closet, such as: *Expello, Expellometer, No-Moth, Germ-ax Moth Tabs, Exo-Nox, Odora Motholator.*

Preparations claiming merely to "destroy moths" (and not to "kill moths"). Apt to have only a mechanical effect in removing moth eggs and larvae, and to be of no greater value than washing or dry cleaning.

Poisoned wool pads, such as: *Moth Wool* (Baltus Rolfs, Inc.). Contained arsenic.

Tanglefoot Difusor Method. Ineffective.

Aroma Moth Vaporizer. Contained 98% common salt.

Termox Moth Proofing Crystals. Contained 60% common salt.

Flori Mothproofing Method. Was charged by Federal Trade Commission with false claims as to efficiency and permanency of the method, and with misrepresenting "insurance" scheme.

Arsenic preparations. Undependable and poisonous. (See *Moth Wool* above.)

Odora moth cake, packet deodorant and moth destroyer, and perfumed ball blocks (Odora Co., NYC). Were misbranded.

Mothex cedarized tablets and para moth pellets (Odora Co., NYC).

Germ-ax Moth Crystals. Ineffective.

Banol.

Resistal Concentrated Moth Proofing Solution. Was not permanent as claimed.

Carbon disulfide and carbon tetrachloride. Effective fumigants, but not recommended for home use because of poison hazard. Carbon disulfide is inflammable.

The following substances are but a few of the worthless ones which have been used by hopeful housewives: tobacco powder, lavender flowers, pyrethrum stems, borax, cedar needles or chips, cayenne pepper, allspice, angelica root, lime, powdered sulfur, baking soda, salt, white hellebore, formaldehyde sprays.

Ideal Moth Block (National Sales Chain Corp., NYC). Label claims were "false and misleading."

Moth-Pruf Cabinets (D. C. Kinnell and Co., Montclair, N. J.).

CU'S MEMBERS *report-*

1937 Refrigerators

I am interested in buying a mechanical refrigerator but do not wish to make a decision until I have more recent information than your 1936 ratings. When will you report on 1937 models?

M. E.

Pleasant Valley, Conn.

Tests on new models are being completed now. A report is planned for the July issue of the *Reports*.

Answer for Doubters

Several people have asked me how I know that Consumers Union isn't bought off by the different companies whose goods you rate. I tell them for one thing you rate some things good and other things as not acceptable that are put out by the same company but I hardly know what else to tell them. As for myself, I have every confidence that Consumers Union is not bought.

P. H. D.

Martinez, Calif.

Consumers Union hears regularly that it has been bought by one manufacturer or another. When, in the *Reports* for last June, three separate General Electric refrigerators were rated as "Best Buys," one member accepted the listings as proof positive that CU was owned body and soul by that company. When, two months later, the General Electric oil burner was rated as "Not Acceptable," the member wrote to complain of inconsistency!

CU is frequently accused of being under the sponsorship of the mail order houses, because a number of mail order products have received favorable ratings. The accusers cite shirts, motor oil, sheets, radios—mail order brands of those products (among others) have been rated "Best Buys." They do not cite refrigerators, shaving soaps, socks, vacuum cleaners—mail order brands of those products (among others) have been rated as "Not Acceptable."

Such examples (the *Reports* offer plenty of them) serve to illustrate the point that P.H.D. makes herself. Beyond them, it may be pointed out that CU is a membership organization, democratically controlled, and subject to the authority of its members, who may bring the issue to a direct head if they should ever find reason to suspect wrong doing. Beyond that lies the fact that CU is chartered as a non-profit corporation under the laws of New York State; its charter would be subject to revocation if any one made a profit from its activities. And beyond that lies the final test of the integrity of any such organization as CU: the integrity of the people identified with it. More than 70 men and women—educators, social workers, scientists, lawyers, government officials, writers—are directors and sponsors of Consumers Union. These people, most of them nationally known and all of them in positions of responsibility, vouch for CU's honesty. A full list of their names is available to anyone.

One Man's Savings

Your monthly bulletins have been invaluable. I have saved, of course, many times the cost of the annual membership—in gin alone. Your reports on labor conditions in various fields are important, for they bring the worker and the consumer together, which is an essential step in economic progress, particularly as the worker and the consumer are generally the same person without knowing it.

I can not speak too strongly in favor of the reports on liquor. It's all one to me whether I die from eating spoiled food or from drinking bad liquor, but I don't want to do either. Accordingly, for the October bulletin in particular much thanks.

D. L. G.

Freeport, Me.

Another Man's Poison

. . . permit me to suggest that for the misguided individuals who think they must drink and thus make themselves a source of danger to the rest of us when they drive and a nuisance in other ways, why do you not issue a supplement to be sent to such as ask for it, containing the information about the national enemy, intoxicants? In this way the sober, sane people would not have the drink business thrust upon them as they peruse your magazine. I strongly urge that you do this. It would at least enable those who

hate the liquor business with a deadly hatred as I do to recommend your reports, as I wish to do and will do.

C.H.L.

Los Verdes Estates, Cal.

Although the *Reports* have not touched liquor since last November (and then only wines), letters from members on both sides of the question continue to come in. Each is filed as pro or con; and the ratio of the one category to the other will help to determine CU's future attitude on ratings of alcoholic beverages.

The suggestion for a separate report on such ratings has been advanced in a number of letters. What do CU members think of it? Further letters on this point will be appreciated.

Items for Improvement

. . . I was one of your earliest converts and am still a loyal supporter. I am not a very good salesman, so have not added many members, but perhaps I can help in other ways.

I am deeply grateful for information which has led me to deprive my children of all lead toys, to cease giving them mineral-oil nose drops, to save the money I might have spent on an electric shaver, to discover the *Wearever* mechanical pencil, to use *Gondola* soap, *et cetera;* and I am grateful for information about the labor conditions under which goods are produced. But there are two or three items that might be improved, I think.

1. Could you do just a bit better about brands of goods sold in the middle west? So often the ones you recommend are not obtainable here. I should be particularly interested in having food product studies include the *A&P* and the *Piggly Wiggly* items rather thoroughly.

2. Could you give a bit more information about cooperatives? I should like to buy food and clothing from such organizations, but I do not know whether one can do so by mail, and there are not many cooperative stores near here. . . .

E. V. K.

Evansville, Ind.

The work of getting CU established this past year has hindered expansion of the *Reports* along several lines and E. V. K. touches on two of them. Even so, *A&P* brands have been included in almost all of the food reports that have appeared to date. The first editorial in this issue should make clear what CU's plans are in respect to regional brands like *Piggly-Wiggly*.

Buying Guide's Binding

BINDING experts gave assurances that the binding selected for the *1937 Buying Guide* would be completely satisfactory. The experts were wrong. They specified extra-heavy cover paper for strength; but they failed to consider that no glue would be strong enough to hold it.

The defect was caught in time to allow most copies to be rebound properly. But not in time to recall several thousand copies already mailed out. If you got one of these early copies, and if the binding is defective in any way, please return it. A new copy, correctly bound, will be sent to you immediately.

The *Reports* have listed numerous products of Cooperative Distributors, 30 Irving Place, NYC, all of which are available by mail. They will furnish a catalog and information on request. The products of several farmers' cooperatives have also been covered. Some articles on cooperative organizations appeared in early issues of the *Reports;* more are scheduled.

A Calldown

Please cancel my subscription at once.

I have read your article on the sitdown strike and think you are wrong about this—dead wrong.

H.M.J.

Buffalo, N. Y.

Consumers Union does not agree that it was dead wrong to publish the comments of a labor lawyer on a topic of such current importance as the sitdown strike. We do not approve of violence by either employers or employees in labor disputes, nor do we approve of every sitdown strike. But, as Secretary Perkins, Senator Robert Wagner, and others have pointed out, there is much to be said for the sitdown. It must be remembered that this strike method developed as the answer of labor to the lawlessness of employers who refused to obey decisions of the National Labor Relations Board or to recognize the right of peaceful picketing outside the plant. Only further experience will show whether the almost uniformly peaceful sitdown can be justified as a substitute for the violence characteristic of major strikes in the past.

Buying Guide

Congratulations upon your "CU Buying Guide 1937." It is priceless . . . invaluable.

D.F.

New York, N. Y.

• • •

1937 Buying Guide just arrived and I want to compliment you on its completeness, compactness, index and all around appearance. I am sure it will be of great value to all members.

H.P.B.

Chicago, Ill.

• • •

Congratulations and appreciation. . . . In both make-up and size it is convenient and ever handy.

R.F.N.

North Arlington, N. J.

• • •

It is excellent in every way—contents, make-up and pocketability.

H.W.B.

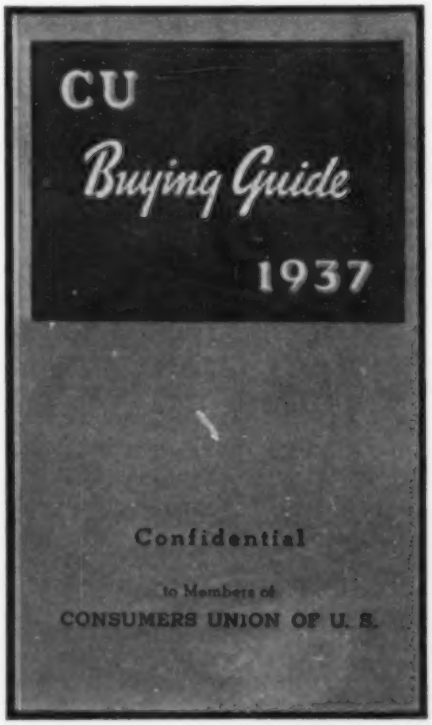
New York, N. Y.

• • •

It is with extreme pleasure and gratification that I report the very favorable reception of the Buying Guide. Not a dissenting comment from even one of our many [group] subscribers. . . .

M.T.

New York, N. Y.



Washing MACHINES

$39.95 to $159.50

FOR a good many families, the purchase of a washing machine involves the investment of several weeks' total income. Tests run for CU on ten models of washing machines show that at best this investment will procure a machine that will wash satisfactorily and run two hours a week for five years or more with only minor adjustments. At worst, it will bring a machine which will turn out clothes of doubtful cleanness, involve possible danger of electric shock, and require major repairs every year or so—all this in spite of a high purchase price.

The tests showed that most of the dirt-removal usually takes place in the first five minutes of washing. Fifteen or twenty minutes, however, are generally required to produce the whitest clothes the machine is capable of turning out.

Washing effectiveness was determined by washing, in the various machines, identical samples of sheeting equally soiled with carbon black. The "whiteness" of the washed samples was then measured with an "illuminometer" to determine their cleanness.

Best dirt-removing ability was shown by the *Watermatic*, which, instead of the usual back and forth motion, has an agitator which runs continuously round and round. Its mechanism is very simple as well as effective. Except for the *Watermatic* the rate of dirt removal did not vary greatly for most of the models tested. The *Thor* and the *Apex*, however, were consistently low.

The *Watermatic* also has a clothes dryer which differs from the usual spinner or wringer. The wet clothes are placed in a compartment lined with a rubber sack. The lid is then clamped down and water from the faucet is admitted between the rubber sack and the outside wall of the compartment, compressing the sack and squeezing the water out of the clothes. The dryer is very effective provided the water pressure from the faucet is 50 pounds per square inch, or more.

As for the spinners and wringers, they were found to be about equally effective in drying the clothes—either will remove all but the last pound of water from each pound of clothes. Machines with wringers are usually cheaper than those with spinners but are more dangerous to use.

A GREAT many cases have been reported of women catching hands, sleeves, and hair in power wringers while drying clothes. Modern wringers have safety releases operated by pushing a bar or pulling a lever. But even if they are in perfect adjustment, such mechanisms may prove useless when most needed because of their inaccessibility or the necessity of quick action under emergency conditions. Most of the releases, moreover, are subject to corrosion and deterioration which, over a period of years, may render them inoperative.

Those whose pocketbooks require that they use a wringer machine should at least take pains to familiarize themselves thoroughly with the method of operation of the safety release, and should make a fixed practice of trying it out every wash-day to make sure that it operates quickly and easily. It is also good practice to leave the safety release open from one wash-day to the next.

If you can afford the more expensive type of dryers, however, do *not* buy wringer machines. Some prejudice against spinner-dryers still seems to exist, because their operation is radically different from that of the wringers, to which most persons are accustomed. They will vibrate unless clothes are evenly distributed in the basket; but their increased safety certainly justifies the extra skill involved.

The effectiveness of spinners for rinsing clothes was measured by comparing the amounts of soap removed from the clothes in equal volumes of rinse water.

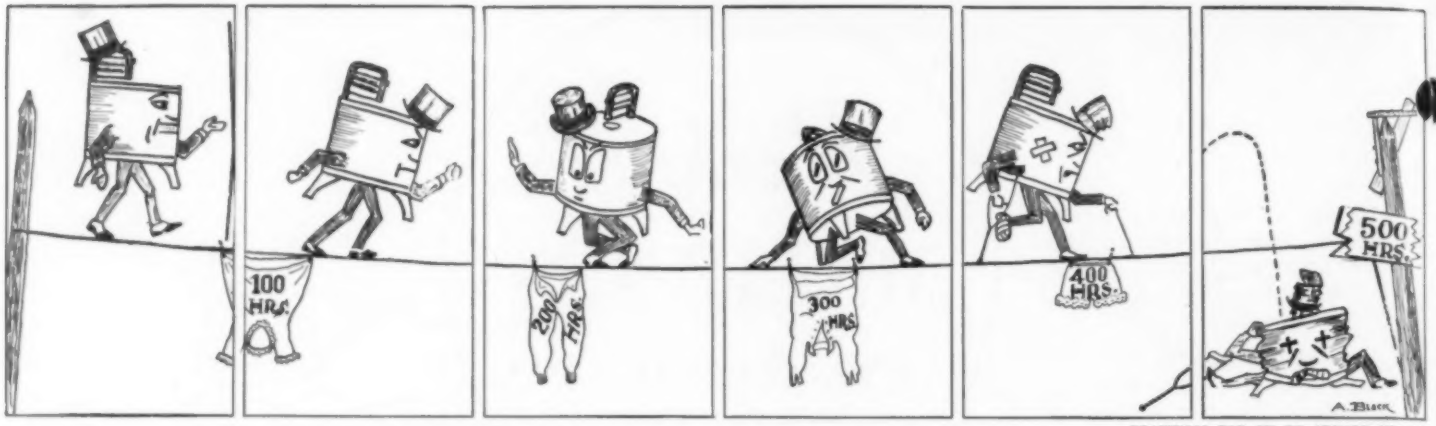
In most spinners the clothes are placed in a perforated metal basket, the water being expelled through the holes in the side of the basket as it rotates. For effective rinsing it is necessary to slosh clothes around in water. Limited amounts of clothes could be rinsed in the *ABC* and *Watermatic* dryers (which are not perforated) and in *Easy* and *Universal* (which have shut-off valves to retain water in the dryer compartment) but not in *Apex* or *GE*, unless the motor was stopped.

In general, the most effective washers wore the clothes most. In no case was the wear considered great enough to justify lowering the rating of the machine.

Current consumption of the various machines ranged from 210 to 375 watts with clothes and water in the machine. This corresponds to a maximum power cost of about 2c an hour for electricity at 5c a KWH. On the basis of two hours of operation per week, the difference between the most and the least economical machine in this respect amounts to less than $1 per year.

In all the machines tested, electrical insulation was sufficient to prevent electrical shock from any part of the machine *except* the motor. Since washing machines are generally used in damp places, where danger from shock is particularly serious, buyers should insist that the motor frames be permanently grounded to a convenient water pipe or other good ground when the machine is installed.

Manufacturers should test all machines for shock hazard before releasing them for sale, withholding those which show excessive current leakage. Tests indicate that this is by no means general in manufacturing practice.



DRAWINGS FOR CU BY ARNOLD BLACK

THE $79.50 THOR WASHER TRIES CU's LIFE TEST

TO TEST durability, all machines except the *Thor* were run for a total of more than 500 hours (most of the time with clothes as well as water in them), which is equivalent to about five years of average use. With the *Thor*, a gear in the driving mechanism wore out and had to be replaced twice. After the third gear failed, the machine was dropped from the durability test.

All machines which had clutches were started and stopped 6000 times. Spinners and wringers were operated for a total of 100 hours each. Wringers were started 9000 times in each direction; spinners were started and stopped 8000 times. The pumps for removing water with which the spinner-machines were equipped were all operated for at least 50 hours.

Following the durability tests all of the machines except the *Watermatic*, which had no enclosed gears, were taken apart and given a careful engineering examination. Note is made in the ratings of results of this examination wherever better or poorer than average durability was indicated.

ONE particular difficulty which has been reported with washing machines is corrosion of aluminum parts. Aluminum is well known to be susceptible to corrosion in alkaline solutions, and since many laundry soaps and washing powders are alkaline, it was considered desirable to cover this point in the tests. Here (and throughout most of the tests) the procedures followed were based on those in specifications of the Association of Edison Illuminating Companies.

The washers were operated for 150 hours with a 10 percent solution of soda ash (sodium carbonate) in them. The *Easy*, *Thor*, and *Maytag* showed serious corrosion of parts. On the first two, the cap which covers the tube on which the agitator is mounted was corroded. On the *Maytag*, the tube itself gave way at the water line, with the result that the agitator fell to the bottom of the tub.

Use of strongly alkaline soaps and washing powders is, of course, definitely injurious to silks and woolen goods, rayons and some colored fabrics, and is unnecessary for most ordinary laundering. It may be the only way, however, to restore very greasy, dirty clothing to reasonable cleanness. Many soaps and powders are recommended, both in advertising and on their labels, as safe for delicate fabrics, when actually they are far too strongly alkaline for such use. (Consult your *1937 CU Buying Guide*, or the *Reports* for August, 1936, for recommendations of suitable laundry soaps for various uses.)

GENERAL suggestions for purchasing washing machines without test are difficult to give. It goes without saying, of course, that the wise consumer will be left eloquently unimpressed by most of the glib phrases of advertising and salesmen. She will judge washing effectiveness by the results of an actual trial in her own laundry—not by the gymnastics the clothes appear to go through, nor by "936 water currents per minute" or "1710 extra water currents."

A home test will also indicate the convenience of the machine in use with stationary tubs or other laundry equipment. See whether its height is comfortable and convenient; make sure that the extension cord is long enough to reach an electric outlet from any position in which it might be desirable to place the machine. (The dealer will usually install a longer cord without extra charge if the buyer insists.) While such a use test gives little information as to the durability of the machine, it does indicate how convenient and satisfactory it will be while it does last.

In comparing sizes of different washers, make sure that the capacity quoted refers to the number of gallons the machine holds when filled to the water line, ready for operation—not the brimful capacity.

The ratings which follow are based on list prices and comparative performance in the tests. On some machines special reductions or trade-in allowances may be obtainable which will make them better buys. Capacities are given to the water line.

Machines Without Wringers

BECAUSE, as we have pointed out above, wringers are very dangerous, we strongly urge anyone who can afford it to purchase a machine which removes water by some means other than a wringer.

Best Buys

General Electric 3G (General Electric Co., Bridgeport, Conn.). $129.50.
Hotpoint AW-11 (Edison General Electric Appliance Co., Inc., Chi-

cago). $129.95. Capacity 16 gallons. Washing effectiveness average. All-around performance satisfactory. Machine tested had leakage current (under high humidity at the end of the tests) exceeding that permitted in safety specifications, indicating possible shock hazard if the motor is touched while plugged in. A "Best Buy" only if precautions are taken to ground motor properly.

The *GE* Model 3G was tested; we are informed by the General Electric Co. that the *Hotpoint* AW-11 is essentially the same.

Also Acceptable

(*In estimated order of merit*)

Watermatic Model 100 (National Metal Products Co., Waterloo, Iowa). $99.50 (but substantial discounts seem to be sometimes available on this machine). Washing effectiveness much better than that of any other machine tested. Driving mechanism unusually simple.

The *Watermatic's* unique extractor (see description above, page 23) is particularly effective for use in rinsing clothes. On the other hand, clothes cannot be packed in it so readily as in the other extractors in this group, and the pressure water takes some time to flow in and out, so that it requires more time for drying a large wash. On the machine tested, one of the lugs which holds down the lid broke in use.

This machine has no pump. It is equipped with a "siphon" which uses the energy of water from a faucet to lift water from the machine to a sink—a possible disadvantage where the water cost is high.

The machine is equipped with an automatic timing device which, on the machine tested, was inaccurate.

Since this machine is radically different in design, the satisfaction to be obtained from it depends on the user's reaction to its particular washing and drying features. Some users have found the drying mechanism inconvenient to use, while others find it quite satisfactory.

Easy Model 5D (Easy Washing Machine Co., Syracuse, N. Y.). $159.50 (highest of the ten machines tested). Capacity 17.5 gallons. Washing effectiveness slightly below average. Aluminum cap over agitator corroded badly in test with solution of soda ash. Mechanical contruction extremely durable.

ABC Model 176 (Altofer Bros. Co., Peoria, Ill.). $124.50. Capacity 16 gallons. Washing effectiveness average. Pump slow in operation. Spinner basket not of the usual perforated type, but solid, flaring outward so that water is thrown out at the top. It dried clothes satisfactorily, and was particularly convenient and effective for rinsing. The locking bar on the spinner clutch wore out early in the durability test so that the spinner would not start (a new one finished the test satisfactorily). The brake on the spinner also became ineffective.

The machine tested had leakage current after one hour of continuous operation exceeding that permitted in safety specifications, indicating possible shock hazard if motor is touched while plugged in.

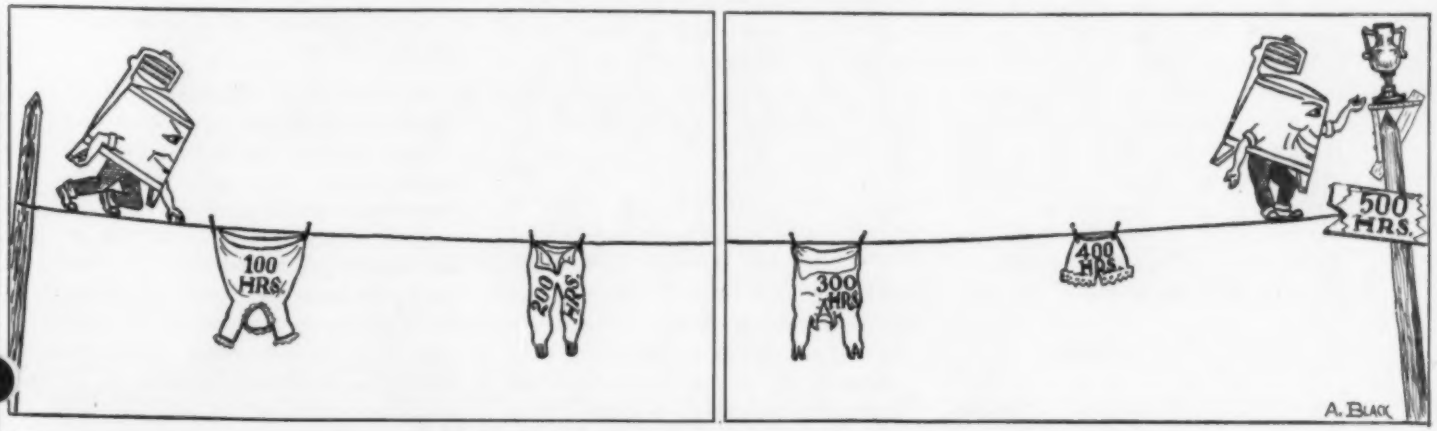
Universal Model E 1660 B (Landers, Frary & Clark, New Britain, Conn.). $129.50. Capacity 12 gallons—smallest of all machines tested and convenient only for small families. Washing effectiveness average. Machine tested had leakage current under high humidity conditions exceeding that permitted in safety specifications, indicating a possible shock hazard if the motor is touched while plugged in. The screen at the outlet to the drain is very small, and clogged during the tests. Machine badly worn after 500 hours. Performance satisfactory otherwise.

Not Acceptable

Apex Model 215 (Apex Electric Mfg. Co., Cleveland, Ohio). $139.50. Capacity 18 gallons. Washing effectiveness very poor. Motor insulation in machine tested failed on test at only 200 volts (all other machines withstood the ordinary test at 1000 volts). Leakage current also was greatly in excess of that permitted in safety specifications. Agitator worked loose and rubbed in bottom of tub during the durability test. Water splashed over the sides of the tub in the washing test.

Machines With Wringers

AS WE have already pointed out, these machines are inherently dangerous and should not be purchased by anyone who can afford one of the above machines. None of the wringer models tested has a water pump, but pumps are usually available at a small extra charge.



THE $48.95 WARD'S LIMPS TO THE FINISHING POST

Acceptable

(In estimated order of merit, but note qualifications)

Ward's DeLuxe Cat. No. —3120, fall-winter 1936–7 catalog (Montgomery Ward). $48.95. Not listed in current catalog but may be available in retail stores. Capacity 19 gallons, convenient mainly for large families. Washing effectiveness average. This machine had leakage current under high humidity conditions exceeding that permitted in safety specifications, indicating a possible shock hazard if the motor is touched while plugged in. Wringer improperly assembled. Some splashing over sides.

Sears-Roebuck retail store Model 7346 (Sears, Roebuck). $39.95. Apparently very similar to catalog Model —3530 ($37.85 plus shipping charges) except for wringer. Capacity 16 gallons. Washing effectiveness average. All-around performance satisfactory, but grease in the wringer was much too heavy, and there was no provision for oiling one of the wringer drive bearings, which was found badly scored at the end of the test. The mechanism for operating the agitator was badly worn after 500 hours.

Maytag Model 30 (Maytag Co., Newton, Iowa). $99.50. Capacity 16 gallons. Washing ability average. The wringer emergency release is simple, but not as convenient as that on the other machines. Aluminum tube carrying agitator gave way under corrosion in test with solution of soda ash, causing agitator to break off. Engineering examination at the end of the test showed very sturdy construction and very little wear of moving parts. This machine would be a very good buy except for the failure of the agitator tube. Such failure is inexcusable in a machine priced so high. For anyone who intends to use strongly alkaline washing solutions, this machine is "Not Acceptable." For anyone else it should prove satisfactory.

Not Acceptable

Thor Model 52A (Hurley Machine Co., Chicago). $79.50. Capacity 14 gallons. Washing effectiveness very poor. A drive mechanism peculiar to the *Thor* throws heavy strains on the driving parts. Three times during the test the fiber drive gear failed and had to be replaced. Aluminum knob on agitator corroded in test with soda ash. General construction rather poor. Machine showed considerable wear after durability test.

Labor in the Washing Machine Factories

IT HAS been hard to get authentic data on labor conditions in plants where washing machines are made. Union organization has not gone far in this industry; and the manufacturers, with three exceptions, have so far failed to answer our letters asking for the elementary facts on their labor policies.

Apparently it is still considered presumptuous for a consumers' organization to ask an employer how many hours a week his employees work, and whether he engages in collective bargaining.We consider this unfortunate. Certainly the employer who deals fairly with his workmen has nothing to fear from disclosing wage and working conditions to the consumers who make it possible for him to stay in business.

The manufacturers of the *Watermatic*, the *G.E.*, and the *Apex* washing machines were the ones who replied to our requests for data on labor policies. The gist of their answers is contained in the notes below.

Average wages in this industry are 50 or 55 cents an hour, as estimated by Julius Emspak, secretary-treasurer of the United Electrical and Radio Workers Union. This would mean $20 or $22 for a 40-hour week, less than half the amount required by the average family of five for a minimum standard of decent living. Skilled mechanics receive as much as 80 cents an hour, or even slightly more; other workers get no more than 25 cents.

As with most other industries, the general wage levels depend largely on the extent to which the various plants have been unionized. Of the companies whose products are rated in the accompanying report, it has been possible to get verified information on only the five listed below.

Apex—Of the washing machines reported on, this is probably the only union-made washer. The manufacturer has operated a union shop since 1934 under an agreement with the International Association of Machinists and other American Federation of Labor unions. Wages are considered good; the 40-hour week prevails, time and one-half is paid for overtime and double time is paid for Sundays and holidays.

G.E.—Rates of pay are fairly good in the Bridgeport, Conn. plant where General Electric makes washing machines, although the scale is about 20 percent below that of the large Schenectady plant. The company has bargained verbally with the United Electrical and Radio Workers, but has not yet signed an agreement. Employees were being subjected to a speedup until they resorted to brief (and successful) sitdown strikes to check it.

Maytag—The workers are now 100 percent organized in a local of the United Electrical and Radio Workers, but there is no indication at the present time of how soon an agreement for collective bargaining may be reached.

Universal—The New Britain, Conn., plant of Landers, Frary and Clark is now well organized and negotiations for a contract are under way as we go to press. Working conditions and wages are below average; the 45-hour week prevails for many jobs, and some hourly rates are well under the 45-cent minimum that the United Electrical and Radio Workers is seeking.

Watermatic—The National Metal Products Company advises us that "Waterloo. . . . has always been an open shop town and there has never been the urge or the need for machine shop unions. Most of our employees are 'old-timers' with us, and live near the plant and really consider themselves part of the business. . . . We have never found any need for collective bargaining, as working conditions are satisfactory." Apparently the employees treat the management fairly in Waterloo.

Protecting Your Garden

A discussion of methods and materials for the control of vegetable garden insects and diseases.

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NO ONE can hope to escape the job of spraying or dusting his vegetables to protect them from insects and disease. It's one of the burdensome aspects of gardening, necessary to the achievement of all the other things that make home gardening so generally satisfying an occupation. There are, nonetheless, certain good practices in gardening which can do a great deal to prevent the spread, or even the first appearance, of trouble. It is the purpose of this article both to outline some methods for the control of pests and to evaluate some of the materials designed for use in the inescapable spraying and dusting.

Remember, first of all, that a healthy plant escapes many difficulties. Therefore, be careful to buy treated seeds and disease-free plants, and disease-*resistant* varieties when necessary. The worst thing about diseased stock is that it infects the soil, which in turn infects healthy plants. An example is cabbage club root, which lives for as long as ten to fifteen years in the soil, waiting for every cabbage plant that comes thereafter. To attempt to grow vegetables not adapted to given conditions of soil, sunlight, heat, moisture, etc., is to invite trouble.

Fresh manure used too shortly before planting is a source of trouble—e.g., scab on beets and potatoes. Too much nitrogen produces soft growth which is susceptible to disease, and on the other hand a very common cause of susceptibility is starvation. Soils which have been injured by overliming, by the continued use of unbalanced fertilizers or pig manure (which causes manganese deficiency), or by other bad practices will produce plants suffering from deficiency diseases. Such problems, if they occur, should be referred to the State Experiment Station, or to your county agricultural agent.

Rotation of crops is important. A 4-year rotation means that a certain crop occupies the same strip of ground once in 4 years. Neglect in this respect may make it necessary completely to give up growing a whole group of vegetables for several years, until the accumulated insects or disease have died out of the soil.

Clean culture (sanitation) is of the utmost importance. Keeping down weeds both inside and outside the garden destroys the safe refuge of many pests that live on weeds and spread from them to closely related crops. At the end of the season all leaves and plant debris are gathered up, and infected material burned. Cleaning up should not wait until fall, however, but should be done all through the season, after each crop is gathered.

Hand picking of diseased and infested foliage when pests first appear, cutting out diseased parts, and destroying badly infected plants will prevent a great deal of trouble.

Even if spraying and dusting were able to control pests in the absence of such preventive measures, they could never take the place of good garden practice, because chemicals are seldom beneficial in themselves, and they have been proved to be injurious to the plants in some cases. Besides, there is always the possibility that eating relatively non-poisonous spray residues over a long period may be harmful.

SINCE half the battle is won if pests are recognized and combated promptly, the gardener should have equipment and materials ready. Efficient equipment includes both a sprayer and a duster of suitable size for the work. Materials to have on hand are:

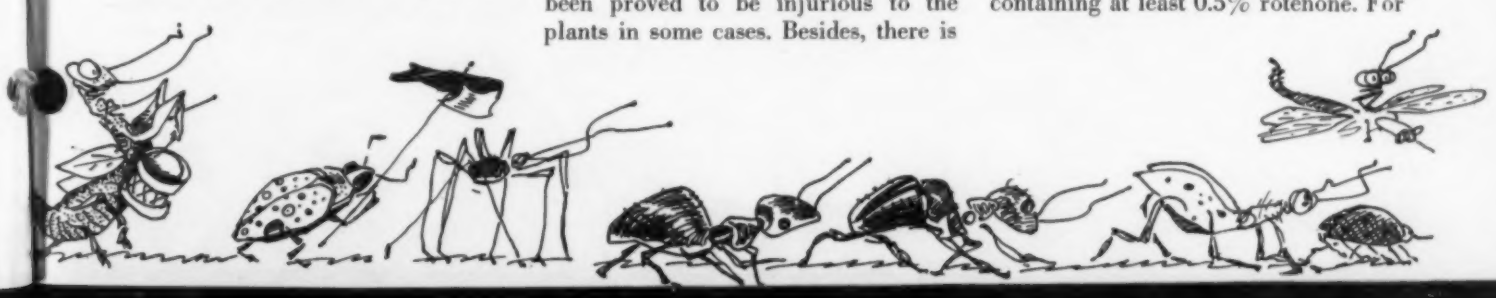
40% **Nicotine Sulfate.** 1½ teaspoonfuls to 1 gal. of water in which soap (potash fish-oil soap is best—see below) has been dissolved. For aphis, leafhopper, and other soft-bodied sucking insects. *Never* omit the soap.

Potash Fish-Oil Soap. For use with the above. 2 tablespoonfuls in a gal. of water. Do *not* use with rotenone or pyrethrum sprays.

Pure Laundry Soap, Flakes, or Beads (*Kirkman's Soap Chips, Ivory Snow* or *Palmolive Beads* are satisfactory). This is second choice to fish-oil soap for the same use. Use 1 oz. (1 cu. in.) to 1 gal. of water. Convenient to use, but not as good as fish-oil soap with nicotine, and, even when pure, too alkaline for pyrethrum or rotenone. Beware of impure soaps and all containing "builders."

Paris Green. To make bait for cutworms, slugs, grasshoppers, and crickets. Mix ¼ lb. with 1 peck (5 lbs.) bran, 1 pt. molasses, 2 qts. water. Mix dry ingredients first. This is better than the commercial preparations, and is *not* attractive to birds. Paris green is *poisonous* (arsenic); care should be taken in its storage and use.

Rotenone (Derris or Cube) Dust, containing at least 0.5% rotenone. For



worms, caterpillars, beetles, leafhoppers, *some* kinds of aphis.

20-80 Copper-Lime Dust. For diseases.

Other materials may be required for special cases, but these will care for all ordinary difficulties.

IN ORDER to prescribe the proper medicine, correct diagnosis is necessary. Every state gets out bulletins on plant insects and diseases. For identifying pests, a bulletin which has good pictures and good descriptions is important, but the best control measures are often given in unillustrated circulars which merely name without describing pests. The gardener should have both kinds on hand. He should also inquire for the most recent mimeographed material, because recommended schedules change faster than bulletins are printed.

The following material will serve as a short guide to the most common vegetable insects.

I. Beneficial Insects

Ground beetles and *lady bugs* or *lady birds* (*except* Mexican Bean Beetle and Squash Lady Beetle). These are to be spared.

II. Harmful Insects, Easily Seen

Sucking Insects. Use nicotine sulfate and soap, generally.

Aphis (plant lice). Usually on under sides of leaves; controlled better by sprays than by dusts.

Leafhoppers. Small, very narrow insects, usually on under sides of leaves; hop away when disturbed, and are very hard to kill. Spray preferred.

Aphis and leafhoppers are dangerous because besides sucking plant juices they spread virus diseases, like mosaic, for which there is no means of control.

Plant Bugs. Look like beetles but suck plant juices through a tube instead of eating plant tissue. Include Squash Stink Bug and Tarnished Plant Bug. *Young* bugs can be killed with nicotine sulfate and soap. Dusts are used as repellents.

Chewing Insects (bite off and swallow plant tissue).

Caterpillars, worms, beetles. Can be killed with rotenone, especially when young. *Magnesium* and *calcium arsenate,* although admittedly effective and cheap, and not as dangerous as lead arsenate, are *poisonous* to human beings, and so should not be used on leafy vegetables or on any plant after pods or fruit are formed.

Slugs, grasshoppers, crickets. May be poisoned with bran bait. (See above.)

III. Insects That Hide or Work Out of Sight

Sucking Insects.

Thrips (e.g., Onion thrips). Very minute and hide in plant crevices; thus they are hard to reach with spray or dust. They leave a white chainlike mark on the leaf surface; badly injured plants turn white. Treatment: nicotine sulfate and soap, clean culture.

Root aphis (e.g., on corn). Ants place plant lice on roots along which they have made burrows; the plant wilts. Since the aphis depend on the ants for their well-being, correct strategy is to destroy the ants. Do not wait for the plant to wilt; if there is an ants' nest nearby, use ant bait, or, with less certainty and higher cost, take the soil down a little off the roots and *drench* them with a strong solution of *Red Arrow* or other pyrethrum spray.

Chewing Insects.

Stalk borers (e.g., Corn Borer, Squash Vine Borer). Stalks break and/or wilt. "Sawdust" indicates the presence of borers; breaking over of tassels is one of the first signs of Corn Borer. Borers can sometimes be cut out, or in certain cases killed by rotenone used at exactly the right time, but clean culture is the outstanding method of control.

Corn ear worms. Feed on the silk and tip of the ear. As soon as the silk appears, dust heavily with rotenone, and repeat at weekly intervals over a period of three weeks.

Cutworms. Dull-colored, naked caterpillars; feed at night and coil up during the day under rubbish or in the soil at the base of the plant. Young plants bitten off near the ground are their work. There are at least three groups, which come at different times, so when more appear after bait has been put out, the bait is not necessarily at fault. Bait remains effective 2 days. Directions for mixing it are given above. A warm night is best for its use.

Wire worms. Wiry, smooth, shiny, about 1 in. long; attack all root crops and tubers. Treatment: early plowing or deep spading, frequent cultivation, trap baits of potato in the spring.

White grubs (legs all near the head). These are injurious to potatoes and corn. To avoid them, do not plant on freshly turned sod. Plow or dig over just before freezing weather.

Maggots of various flies—e.g., Cabbage Maggot, which attacks all the cabbage family, and Carrot Rust Fly. Wilting on a warm day is a typical sign of Cabbage Maggot, but Carrot Rust Fly injury may not show until the roots are pulled. Consult state bulletins, county agents, or experiment stations. Clean culture, rotation.

VEGETABLE diseases are often very hard to recognize. Sometimes the special signs of disease are overwhelming, but in case of doubt, first make sure that the trouble is not due to insects above or below ground, outside or inside the plant tissue. Such conspicuous signs of infection as spots, powdery areas, blights that shrivel the leaves, films of mildew, and rots are easily recognized as due to disease, and for almost any disease which attacks the plant aboveground, 20-80 Copper-Lime dust or Bordeaux mixture spray is prescribed. Thus it is not always necessary to be able to name the disease in order to combat it. Smut ("boils") on corn is not treated with copper fungicides; instead, the boils are cut out before they burst.

Poor yield, with no conspicuous disease symptoms present, may be due to disease, or to poor growing conditions, or to a poor strain of seed. Wilt-

ing may be due to lack of water, to hot sun after a period of soft, fast growth, to root aphis (look for ants' nests), maggots, or borers, or to root rots, nematodes, or virus disease. Mottled leaves may be a sign of mosaic (a virus disease), or too much nitrogen. Yellowed foliage may come from disease or wrong soil conditions—e.g., the Yellows of spinach, when spinach is grown in acid soil.

These more obscure conditions require special treatments, so it is very important to identify them individually. For this we must refer you to your state bulletins, because no brief classification would be useful. Bulletins on vegetable pests classify and describe diseases under the kinds of vegetables affected, which makes identification fairly easy. If a careful study of state publications fails to solve the problem, consult county agents or experiment stations.

Spraying, dusting or other treatment must be prompt and thorough to be successful, and since effectiveness often depends upon exact *timing* in relation to the life history of the insect or disease, the recommendations of local experiment stations should be followed carefully. When fungicides are used on foliage they should be applied before rather than after rains, and must be constantly renewed, at intervals of 10 days or less, in order to keep the whole plant, including the new growth, always covered with a protective film.

WE HAVE rated materials according to their value for average home vegetable garden conditions, with especial emphasis on wide use with effectiveness and safety. For special problems, expert advice may be necessary.

Nicotine

Best Buys

N.P.C. Nicotine Sulfate 40%, Black Leaf 40, Nikoteen 40%. Buy on a price basis.

Acceptable

Wilson's O K Plant Spray, Aphine, Aphis Spray. Very expensive per unit of active ingredients.

Spreaders, Activators, and Carriers

Best Buys

Potash Fish-Oil Soap (W. H. Owen, Port Clinton, O.; Wm. S. McDonough & Son, NYC). Use only with nicotine.

Goulac (distributed by Eastern States Farmers' Exchange, Springfield, Mass., and probably other farmers' cooperatives). Good spreader for nicotine, pyrethrum, and rotenone. 5 lbs., 60c.

Grandpa's Wonder Pine Tar Flakes, lowest price; ***Grandpa's Liquid Pine Tar Spray*** (Beaver Remmers Graham Co., Dayton, O.). Neutral soap to use with pyrethrum and rotenone.

Red A Soap; C. P. O. Liquid Soap. Neutral soaps.

Treni Dust; Inert C Dust; talc. Light carriers for pyrethrum and rotenone, usually sold wherever pure rotenone and pyrethrum dusts are offered for home mixing. 5c or less per lb.

Fuller's Earth (sold at drug stores). For the same purpose as above.

Pure Laundry Soap, Flakes, or Beads. Use only with nicotine.

Not Acceptable

Cheap Laundry Soap, or any containing builders. May burn foliage.

Rotenone

Rotenone sprays and dusts (from derris, cube, and timba) act both as contact and stomach poisons for insects, and are non-poisonous to humans; hence they have a wide range of usefulness and are valuable as safe substitutes for arsenicals. Rotenone never kills quickly, but requires 3 to 48 hours; as a stomach poison it is good for 3 or 4 days.

The dust is not as efficient against aphis and leafhoppers as rotenone spray solutions plus a neutral spreader, but for other purposes dust is preferred. Unless combined with a wetting agent the dusts are unsatisfactory when mixed with water as suspension sprays, in hand sprayers. Rotenone *must be* fresh to be effective. Insist on getting this year's fresh supply and buy for one season.

Best Buys

Pysol (McCormick & Co., Baltimore). Excellent rotenone spray.

Home-mixed Rotenone-Clay Dusts. To make a 0.5% dust, shake in a box with a few pebbles ½ lb. fresh derris or cube 4% dust, and 3½ lbs. inert clay, talc, or fuller's earth (see above). Farmers' cooperatives and orchard supply houses carry these materials, and seed stores can get them for you. A good orchard supply house that will fill small mail orders is Frost Insecticide Co., Arlington, Mass.

Rotenone-Clay Dusts, unbranded, good if fresh and *mixed on order.*

Also Acceptable

Rotecide (spray), ***Rotecide Dust.*** The dust is perhaps the best of the widely advertised brands, but beware of old stock from the retailer's shelves.

Cube Root plus Wetting Agent (Eastern States Farmers' Exchange). 30c a lb. Use as ingredient of home-made rotenone-clay dust or for suspension spray.

Kubatox Liquid, Kubatox Dust. Acceptable if fresh.

Cubor. Acceptable if fresh.

Not Acceptable

Derrisol. May burn foliage.

Bonide Greentox. Found inferior in 1936 field tests.

Pyrethrum

Pyrethrum, a contact insecticide for special purposes, must be fresh to be effective, and the sprays are more efficient with the addition of neutral soap. It kills more quickly than rotenone.

Acceptable

Red A Pyrethrum Powder, Black Arrow Insect Dust 5000.
Red Arrow Garden Spray, New Evergreen (spray).

Stomach Poisons and Baits

All commercial stomach poisons except rotenone are poisonous to human beings. Cost aside, there is no reason why arsenicals or fluosilicates should be used at all on homegrown vegetables.

A new non-poisonous insecticide, *Phenothiazine,* promises to put an end to the use of lead arsenate and other arsenicals in this country. Phenothiazine is still in the experimental stage, and is not yet available even to farmers and orchardists. Consumers should be prepared to demand the new insecticide for themselves, as soon as it becomes available to farmers. If all goes well, Phenothiazine will probably be out next year.

Baits are *very poisonous.* Use extreme care in handling, store out of children's reach, and keep children and animals away from the garden when they are being used.

Acceptable

Magikil Ant Jelly (Lethelin Products Co., Inc., Manhasset, N. Y.). 0.5% thallium sulfate. Put it on bits of wood. 1 oz., 35c.
Paris Green. (Poisonous.) For bran bait.
Tat (Soilicide Laboratories, Upper Montclair, N. J.). 1.3% thallium sulfate jelly (*poisonous*), for ants.
Antube (Buckeye Chemical & Specialty Co., NYC). Sodium arsenate syrup, for ants. Not as efficient as thallium sulfate bait, but less poisonous.

Not Acceptable

Antrol, Snarol (baits).
Hellebore, Lead, Magnesium and Calcium Arsenates, *Insectrogen.*
Barium Fluosilicate, *Dutox.*

Fungicides

For spraying and dusting vegetables, copper fungicides are recommended. Copper is slightly poisonous, and therefore dusts, where effective, are more desirable than sprays, which stick better. Vegetables should be washed carefully.

Best Buys

Copper-Lime Dust 20-80. Buy one year's supply; but not more than 10 to 15 lbs. for a small garden, depending on the crops grown.
Homemade Bordeaux Spray. Dissolve 1⅓ oz. (2⅔ tablespoonfuls) of *powdered copper sulfate* in a little water; stir 1⅓ oz. (6 tablespoonfuls) of *hydrated spray lime* in a little water; combine, and add water to make 1 gal. Use at once; throw away surplus spray. Good powdered copper sulfate is a perfectly uniform pale blue powder; good spray lime is fluffy, pure white, free of grit, and fresh. Buy only one year's supply. If used to supplement copper-lime dust, but not to take its place, 5 lbs. of each ingredient will be enough, even if potatoes are grown.

Not Acceptable

Hammond's Copper Solution. Good stainless spray, but not recommended for vegetables.
Fungtrogen. Too weak for vegetable pests; very expensive.
Dry Bordeaux Powders. Never make as efficient a spray as the homemade and are sometimes adulterated.

Commercial Mixtures

Any pyrethrum-rotenone mixture which contains enough of each ingredient to be really effective in every case is wasteful whenever rotenone is indicated instead of pyrethrum, or vice versa. Some mixtures of pyrethrum and rotenone do not contain enough of one or the other to be effective against certain insects. There is little use for sulfur on vegetables. "All round mixtures" which do not name the ingredients usually contain lead arsenate or other poisons.

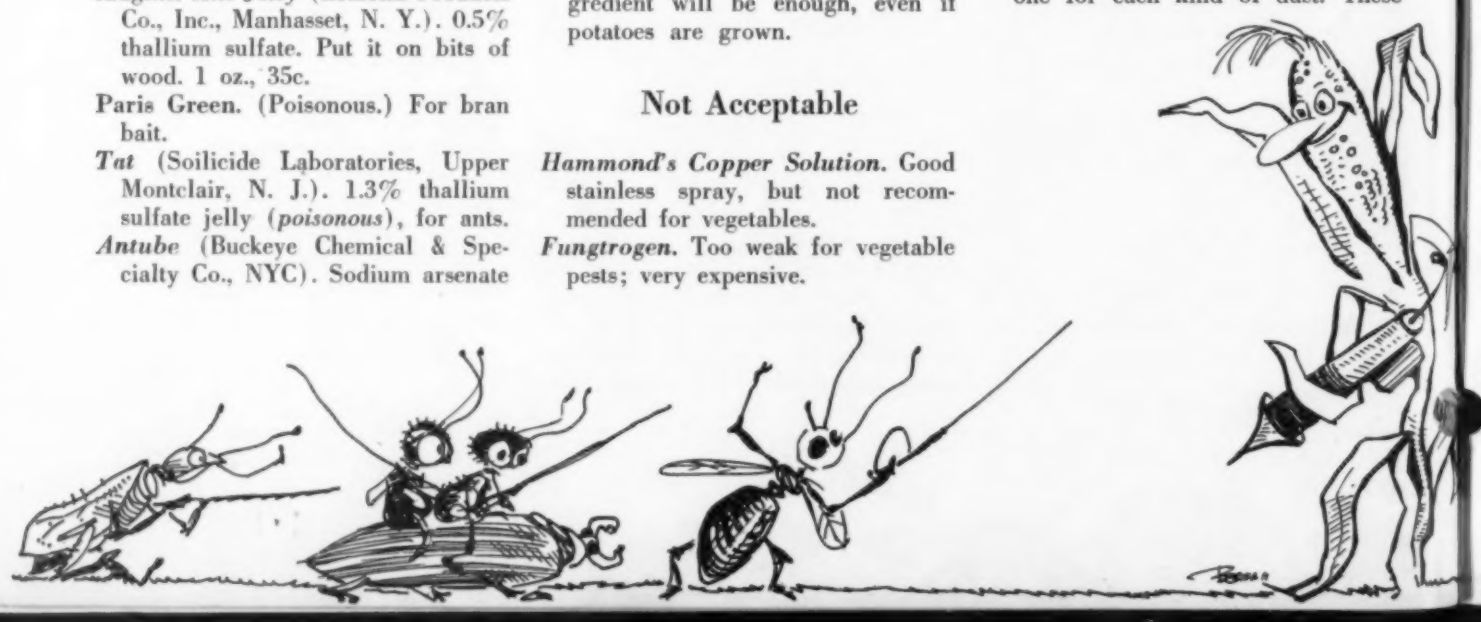
Not Acceptable

Sea Green, Pyrote, Nico-rote (sprays).
Lucky Strike Dust, Sulrote, Lutzite (dusts).
Triogen, Pyrox, Acme All Round Spray (contain lead arsenate).

Sprayers and Dusters

Best Buys

Feeny, Pomogreen, or ***Hudson*** dusters. Plunger type. 2-qt. size costs about $2.50. Buy on a price basis.
Handy Box Duster (Clean Home Products Co., Chicago). Made of cardboard. 30c each, $3 a doz. Buy one for each kind of dust. These



are better than the smallest size plunger-type dusters.

Also Acceptable

Platz Green Duster (P. E. Lirio, Vineland, N. J.). Superior hand duster, bellows type. $7.50.

Vermorel Eclair (P. E. Lirio, importer). 3½-gal. knapsack sprayer, very good, but heavy. $20.

Smith Blizzard Hand Sprayer (D. B. Smith Co., Utica, N. Y.). 1-qt. capacity. $1.85, plus 50c for an extension. Good for about 1 year.

G & O Sprayer (Sears Roebuck). 1-qt. capacity. $1.65. One year's use.

Not Acceptable

Most Small Hand Sprayers will not last through one season without leaks.

Compressed Air Sprayers. 3 and 4 gal. capacity. Poorly made. Better refill a quart sprayer.

Insectogun (Insecto Products Co., Burbank, Calif.). $3.25. Used with hose, has serious drawbacks—e.g., suspensions clog it. But it dilutes spray accurately and has been found good under special conditions.

Antipestick, and *Garden Hose Spray Gun*. Inefficient; no way of controlling the strength of the solutions.

A Few References

(Not necessarily up to date for control measures)

The Nature of Plant Diseases, Circ. 41, West Virginia College of Agriculture, Morgantown, W. Va.

Control Calendar for Vegetable Pests (1937), Extension Bul. 116, Mass. Agricultural College, Amherst, Mass. Up to date.

Control of Garden Insects and Diseases, Ohio Extension Bul. 76, Ohio Agricultural Experiment Station, Wooster, O.

Diseases and Insects of Garden Vegetables, U.S.D.A. Farmers' Bul. 1371.

Insects Feeding on Truck Garden Crops, Bul. 391, U. of Illinois, Urbana, Ill.

Fighting Insects in the Vegetable Garden, Bul. 186, Purdue University, Dept. of Agricultural Extension, Lafayette, Ind.

1937 Control Schedule of your state.

Fact or Fable?

Answers to Questions on p. 6

1. True. One of the end products formed by alum-type powders is Glauber's Salt (sodium sulfate), a well known cathartic. The acid ingredient of alum powder is sodium aluminum sulfate; and whether it is safe as a food is the subject of bitter controversy. Many countries (England, France, Germany, and Sweden among them) forbid the sale of alum powders. See November *Reports* (1936).
2. False. Hundreds of people die every year from agranulocytosis caused by drugs containing aminopyrine; and it should be illegal to sell them anywhere except on a doctor's prescription. So far as CU knows, no city has such a law. The New York City Board of Health passed an ordinance in January, 1935 prohibiting the open sale of aminopyrine. But the ordinance was amended six months later, for reasons we can only surmise, to permit the sale of the drug in 2-grain quantities. And a tablet containing 2 grains of aminopyrine is ample to affect a susceptible person. See April *Reports* (1937).
3. False. Potato pulp is used as a filler, along with noodles and cereals, to give the soup a thick consistency. Its presence in quantity means that the proportion of green vegetables is small and the flavor poor. See June *Reports* (1936).
4. False. This is only one of the nonsensical claims that have found their way into shaving cream advertising. Creams have also been ballyhooed as pore-cleansers, preventives of ingrown hairs, abrasions and infections, mosquito repellents, treatments for athlete's foot, and general skin conditioners. The advertisers have gone so far as to meet ridicule even among themselves. Dr. E. G. Thomssen, chief chemist of the J. R. Watkins Co., summed up the situation mildly in the trade journal *Soap* last year: ". . . advertising copywriters particularly have originated such stringent publicity specifications for shaving preparations that even the most expert chemist would have difficulty to fit his product to meet the claims of much of the ballyhoo. . . ." See Jan.-Feb. *Reports* (1937).
5. False. Interior finish should always be of porcelain enamel, even if it means extra cost. See July *Reports* (1936).
6. False. Metallic hair dyes are very dangerous to use, and they will not restore hair to its original color (nor will any other kind of dye). The only safe hair dye is pure henna. Aniline dyes are the most effective but they, too, can be extremely injurious. See August *Reports* (1936).
7. The correct answer is *e*. They used to be distinct products; cold cream was used as a lubricant, and cleansing cream for what its name implies. Today the two creams are used interchangeably and differ little if at all in composition. The manufacturers themselves make no actual distinction. Thus one jar is labeled "cold cream for cleansing"; and the label on another reads: "Cleanses the skin . . . keeps it youthfully soft, clear and lovely." See April *Reports* (1937).
8. False. Most people are accustomed to eat a definite number of slices with a meal; the bakers prefer that the slices be thick so that more bread will be eaten and more loaves purchased. See August *Reports* (1936).
9. True. All of the Japanese-made hot-water bottles tested by CU were "Not Acceptable" because of structural defects. See September *Reports* (1936).
10. False. As the *Journal* of the American Medical Association pointed out last summer (June 13), "the greatest danger perhaps at the present time lies in too much exposure to sunlight rather than too little." There is some medical belief that too much sunlight may cause skin cancer. There is ample evidence that, in hypersensitive persons, skin diseases and even systemic disturbances may result from prolonged exposure.

(*Continued from page 2*)

termining techniques, establishing the organization. And the time and effort and difficulties involved in doing so necessarily held up the realization of many plans. Those difficulties are largely over now; or, at least, with a year's experience under its belt, CU is better able to cope with them. The increased size of the *Reports* is indication that the staff's energies are being released from groundwork to more directly productive ends.

So CU's members may expect, for one thing, a publication more amply fitted to their needs and wants. To the fullest extent possible, CU's staff intends to introduce into the *Reports* material that has been touched on lightly if at all to date: material on insurance, investments, medical care, health, and the like. Except as unforeseen circumstances may interfere, each issue in the future will contain at least one article on such subjects.

The technical reports and ratings of products will remain the backbone of the *Reports*. With them, the staff's primary plan is to add considerably to the number of brands reported on in any given field; and to widen the coverage of non-national brands. CU is under no illusions that it will be able to do overnight the job eventually to be done. But members will have just cause for complaint if the job is not done on an increasingly bigger scale in the coming issues.

By way of rounding out the *Reports* generally, new features will be added as often as plans for them mature and space permits. One new one—the department of news items—appears this month to take its place alongside "Fact or Fable?" (begun in March) and "CU's Members Report" (begun in April).

The end in view, to be achieved by building up the *Reports* along all these lines, is to give the consumers of America a publication worthy of their importance in the scheme of things. The end is admittedly a long way off. If something has been done toward reaching it, vastly more remains to be done. If the membership has grown fast, it must grow much faster. And if members have helped immeasurably, they must help much more.

As expected, CU's advertising is being refused by more and more publications now that CU's work is beginning to make itself felt. Commercial interests which dislike an open statement of the truth about products may be expected to bring their big guns into play in an effort to stop it. But the work that CU has undertaken is bound up with too many American people to be stopped.

Thirty-seven thousand members is not a great number in itself; but it is a very impressive foundation on which to build. And, as the gentleman in the White House has said, we have only just begun to fight.

Advertising from the Inside

ONE of the most insistent plaints of the advertising people is that it's wrong and unreasonable to attempt to regulate advertising from the outside. Regulation, they maintain stoutly, must come from the inside: the advertiser must be his own keeper. And so, periodically, the advertising fraternity has a conference, inveighs thunderously against its baser tendencies, passes some resolutions, sets up a new board or two. The trade press dutifully records the dawn of a new day, and the air in the offices grows thick with determination.

It is a sad thing that the formula at this point goes sour. For now that the step has been taken, everyone concerned, including the new board or two, promptly forgets all about it, content that duty has been done and right upheld. Meanwhile, the more effective energies of the fraternity are directed toward the end of preventing regulation from sources that might prove more fertile—e.g., the government.

There is no originality to this plot. The advertising arena is strewn with the dead and decaying bodies of "Control Boards," "Truth in Advertising Crusades," "Clean-up Commissions" and the like. Old inhabitants of the advertising world don't pay them much attention, knowing well that if they ignore the commissions the commissions won't bother them.

We are led to these reflections by the fact that advertising has just recently inaugurated a new movement aimed to purge it of some of its more flagrant transgressions. Within a few months the new movement will have died the customary death; and so it had occurred to us that if we were to have anything to say on the subject we would have to say it fast. As it turns out, our job has been greatly simplified by a gentleman who writes a column for the *Daily News Record*, a retail trade paper. His name is Edward M. Ruttenber, and since he writes from the inside he ought to be well posted on the status of regulation over there. We urge your attention:

"It would be nice to think that the advertising and publicity propositions could be made thoroughly hygienic but [I] doubt the ability of any organization short of the United States marines, to undertake the job with much success.

"Successful advertising is usually graceful exaggeration. Then there is the fear type of publicity which manages to make people think they smell bad or look terrible, are being ostracized by polite society or stand in immediate danger of losing a job for some vague reason. This terror type of advertising is the most offensive in the field today but in so far as one may glean there is no law against it.

"Laws are made for small fry who talk wildly in a spirit of desperation and become so flagrant with their arm waving and price gab that they attract attention to themselves. . . . Clever fellows do not get into trouble for their exaggerations or duplicity. . . .

"The obvious factor to clean up the advertising business is the public itself and I am not so sure that people are not quite capable of doing the job. As prices go up, and they are certainly headed that way, the retail customer wants all the details and if there is anything wrong with an article it comes back. But as for advertising itself I should hate to undertake the job of making it truthful.

"It wouldn't be advertising if it stuck to facts."

Thus Mr. Ruttenber. We have nothing to add.